

Central Provinces Administration

EDUCATION DEPARTMENT

Nagpur, the 22nd June 1915.

RESOLUTION.

In the Administration's Resolution No. 682, dated the 8th July 1914, a Committee was appointed to consider a scheme for the creation of a University at Nagpur, or in its immediate neighbourhood, of the teaching type and for the affiliation to this central institution of colleges situated in other places in the Province. The report of the Committee has now been received, and, in accordance with the promise made in the Resolution referred to, it is published for general information and for comment before orders are passed on it. Copies of the report may be obtained from the Superintendent, Government Printing Press, Nagpur, at a price of annas 8 per copy. The Chief Commissioner will take the report into consideration on the 1st of November next, and he will be glad to receive before that date any criticisms or comments which may be offered regarding the proposals of the Committee. All such communications should be forwarded to the Secretary to the Chief Commissioner in the Education Department, Nagpur.

Sir Benjamin Robertson desires to place on record his appreciation of the work done by the Committee, and he wishes in particular to thank Mr. Jones for the services he has rendered both in preparing materials for the Committee's consideration and in performing the duties of Secretary to the Committee.

ORDER.—Ordered that a copy of this Resolution be published in the *Central Provinces Gazette*.

J. T. MARTEN,

Chief Secretary to the Chief Commissioner,

Central Provinces.

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ANALYSIS OF REPORT.

PRELIMINARY.		
Chapter.	Paragraph.	Page.
I	1 Resolution No. 682, dated the 8th July 1914, of the Local Administration, instructs the Committee to frame a scheme for a University of the teaching type in Nagpur, and for the affiliation to the University of Colleges in other places in the Central Provinces and Berar ...	I
"	2 The first Session of the Committee was held from the 23rd July to the 1st August, and the second Session on the 9th and 10th September 1914. The Committee express their acknowledgments of the services rendered by the various Sub-Committees ...	I
"	3 The Committee express their obligations to the various authorities whom they consulted ...	I
"	4 The third Session of the Committee was held from the 21st to the 23rd December 1914 ...	I
"	5 The fourth and last Session was held on the 8th and 9th March 1915 ...	I
"	6 Appendices VII and VIII contain estimates of the capital and recurring expenditure involved by the scheme which is set forth in the Report ...	I
PRESENT ORGANIZATION OF UNIVERSITY EDUCATION.		
II	7 The Government College, Jubbulpore, was founded in 1873: the Hislop College, Nagpur, in 1883: and the Morris College, Nagpur, in 1885 ...	I
"	8 The Victoria Technical Institute was established in Nagpur in 1905, and in 1906 classes were opened for instruction in Physics and Chemistry. In 1908 these classes became known as the Victoria College of Science ...	2
"	9 Meantime the Training School for teachers was established in Jubbulpore. In 1911 this school was raised to the status of a College ...	2
"	10 The School of Agriculture was founded in Nagpur in 1888, and raised to the status of a College in 1906. In 1914 a Medical School and a School of Engineering were established in Nagpur ...	2
"	11 All the Colleges, except the Agricultural College, are affiliated to the University of Allahabad, the Morris and Hislop Colleges up to the M. A. and B. Sc. standard, the Jubbulpore College up to the B. A. and B. Sc. standard, the Victoria College up to the D. Sc. standard, and the Training College up to the L. T. standard. Attached to the Morris College is a School of Law in which instruction is provided up to the LL. B. standard. This school is also affiliated to the University of Allahabad...	2
"	12 The total number of students taking Arts and Science Courses in 1914-15 is 946. There are 140 Law students, and the Training College contains 8 graduates taking the L. T. course, and 56 undergraduates taking the diploma course ...	2
"	13 The Hislop College is situated in the city, and its buildings cannot be expanded except at a prohibitive cost. It provides residential accommodation for about one-seventh of its students. The Morris College occupies the old Residency just outside the city, but the building is unsuitable. The College provides residential accommodation for 112 out of 286 undergraduate students. The Victoria College occupies a portion of the Victoria Technical Institute which is in the Civil Station. Its rooms, however, are required by the Agricultural College ...	2

Chapter.	Paragraph.		Page.
II	14	The Government College, Jubbulpore, is at present located near the city, and the Training College is in its immediate neighbourhood. New buildings, however, are being erected for the Government College on a site about 4 miles from the city. These buildings, which will contain residential accommodation for 200 students, will be completed by the close of 1915. The Training College will occupy the vacated buildings	3
"	15	Nagpur and Jubbulpore are, at present, the only centres of Collegiate education in the Central Provinces and Berar ...	3
"	16	The people of Berar, however, have long wished to have a College of their own, and, when subscriptions amounting to two lakhs had been collected in connection with the King Edward Memorial Fund, the Central Committee proposed to contribute that amount towards the buildings and equipment of a College. The Local Administration accepted the proposal, and agreed to establish and maintain a College in Amraoti, the head-quarters of the Berar Division. A site has been selected, but building plans have been delayed pending the recommendations of the University Committee	3
		GENERAL FEATURES OF THE PROPOSED UNIVERSITY.	
III	17	Until recent years Indian Universities were purely examining universities	4
"	18	One result of this was that examinations and degrees acquired an undue prominence, and the training of the mind was subordinated to the necessities of the examinations ...	4
"	19	A second result was the almost total neglect of the life and character of the students	4
"	20	Of late years, under the stimulus of the Indian Universities Act, a higher conception of the functions of a University has begun to prevail. It is now recognised that a University should teach as well as examine, and should pay attention to the formation of character	4
"	21	The proposal to establish a University in Nagpur, which should embrace Colleges in Jubbulpore and Amraoti, is in accordance with present lines of development, and provides for the possibility of further University extension in the future ...	4
"	22	The proposed University will differ from existing Universities in that it (a) will have larger teaching functions, and (b) will exercise a more effective control over the constituent colleges. The University will directly manage all colleges provided by public funds, except the Training College. Colleges under private management will be subject to its control in all matters relating to instruction and discipline. The former (with the exception of the Training College) will be called Incorporated, the latter Affiliated, Colleges. ...	5
"	23	The permanent Administrative and Teaching Staff of the University and the Incorporated Colleges should be Government Officers whose services are placed at the disposal of the University	5
"	24	The University should be given a large measure of control over the funds which are placed at its disposal by the Government.	6
"	25	The government of the University should be vested in a Senate of 75 members, consisting partly of <i>ex-officio</i> members, partly of persons elected by registered graduates, and partly of persons nominated by the Chancellor, of whom a large proportion will be teachers of the University and the Constituent Colleges. The executive should be lodged in a Syndicate consisting of 12 to 15 members	6
"	26	The influence of the Teachers should be predominant in the government of the University, but lay opinion should also be largely represented; and the activities of the University should be subject to the general control of the Local Administration.	6

Chapter.	Paragraph.		Page
III	27	The proposed University will comprise the following institutions :— The Hislop, Morris and Craddock Colleges, and the Non-Collegiate Institution, in Nagpur; the Robertson and Training Colleges, in Jubbulpore; and the King Edward College, in Amraoti. The Craddock College, the King Edward College and the Non-Collegiate Institution will be new institutions. The Victoria College of Science and the Law School will be transformed into University Departments	6
"	28	The University and the Colleges in Nagpur will be concentrated on a site about two miles from the city, and about the same distance from the Civil Station. This will involve the abandonment of the present Hislop College and Morris College buildings.	7
"	29	Concentration of the University and College buildings is necessary, in view of the importance of close co-operation between the University and the Colleges, and among the Colleges themselves, in the work of teaching. The Colleges will be essentially residential institutions. Non-resident students will be members of the Non-Collegiate Institution	7
"	30	The University, at its inception, will contain Faculties of Arts, Science and Law. The time is not ripe for the establishment of Faculties of Agriculture, Medicine and Engineering	8
"	31	The University and the Colleges will share between them the work of teaching, the former, in general, providing instruction in the more advanced courses	8
"	32	The University, however, will provide courses of instruction in Science in all the stages of study for students in Nagpur. The Robertson College, Jubbulpore, and the King Edward College, Amraoti, will provide instruction in Physics and Chemistry up to the B. Sc. and Intermediate standards, respectively	8
"	33	Until recent years Indian universities did not provide separate Honours courses for the degree of Bachelor	8
"	34	Separate Honours courses are necessary for two reasons,—(1) They provide scope for the abilities of the more brilliant students, and (2) they attract scholars of distinction to the service of the University	8
"	35	Advanced courses of instruction (<i>i. e.</i> , Honours and post-graduate courses) must be concentrated in the University, because in the University alone will it be possible to create the conditions necessary for their successful organization. It will be impossible for many years to create these conditions in the external colleges	9
"	36	The University, therefore, will be responsible for the organization of advanced courses, but the colleges in Nagpur will share in the work of instruction.	9
"	37	Length of courses of instruction in Arts, Science and Law in the University of Allahabad	9
"	38	The Intermediate course should be a two years' course, as it is at present. Some members of the Committee considered that the Intermediate course should be made a three years' course, on the ground that a two years' course is not a sufficient preparation for the Degree courses. But this extension of the course would involve certain practical difficulties, and the end in view can be attained by improvements in secondary education, and in the methods of instruction in the Intermediate course	10
"	39	The B. A. Pass course should be a two years' course, as at present: the Honours B. A. course a three years' course	10
"	40	The M. A. course should be a one year's course for graduates who have taken an Honours degree. The course should provide a training in methods of research	

Chapter.	Paragraph.		Page.
III	41	Graduates who have taken a Pass degree should take a course of two years before proceeding to the M. A. degree ...	10
"	42	Research courses in Arts and Science leading up to the degree of Doctor should be provided ...	10
"	43	It should be necessary to take a degree in Arts or Science before proceeding to a Law degree ...	10
"	44	In the course for the degree of Bachelor of Law, more attention should be paid, than has hitherto been the case, to the scientific study of Law. The course should be more thorough and comprehensive, and should extend over three years, instead of two years, as at present prescribed by the University of Allahabad ...	11
"	45	The L. T. course a one year course ...	11
"	46	A University Art Museum should be established ...	11
"	47	The lecture, as the usual method of instruction, is not calculated to develop the students' powers of originality ...	11
"	48	The chief method of instruction should be the tutorial class, consisting of not more than 20 students ...	11
"	49	The hours of instruction assigned to a teacher should be limited...	12
"	50	A considerable body of teachers will be required, if the Committee's recommendations are to be carried out, but the estimate is not excessive ...	12
"	51	The formation of character should be one of the primary aims of the University ...	12
"	52	Residence in College is one of the essential conditions of the formation of character. The Colleges should be residential institutions ...	12
"	53	The main features of the proposed Collegiate system are—(i) the limitation of the size of Colleges; (ii) the creation of facilities for close relations between teachers and students by providing the former with residences on the spot; (iii) the provision of facilities for poor students to enter into residence ...	12
"	54	Non-resident students should be members of the Non-Collegiate Institution in Nagpur. In the other centres, however, the number of non-resident students will not be sufficient to warrant the establishment of separate Non-Collegiate Institutions ...	13
"	55	A department of Physical Education should be established for the medical examination and physical training of undergraduates ...	13
"	56	The College should be the unit of the University system, but University <i>esprit de corps</i> should be encouraged in various ways.	13
"	57	An external Matriculation Examination affords no guarantee of the general training which is an indispensable condition of undergraduate work ...	13
"	58	The curricula of the schools should not be determined by the demands of a University matriculation examination. Admission to the University should depend on a candidate's school record which should be set forth in a School Leaving Certificate. If necessary, the University may require supplementary evidence of a candidate's qualifications for matriculation ...	14
"	59	Special cases, <i>e. g.</i> , the case of candidates for admission who have not attended a school, may be provided for by the University regulations ...	14
"	60	No special provision will be required for women students for some years to come. Such women students as are able to attend the courses of instruction should be members of the Non-Collegiate Institution ...	14

COMPOSITION OF THE UNIVERSITY.

Recommendations.

IV	61	The University should embrace Colleges in Nagpur, and in other centres	...	...	14
"	62	Number of Colleges (see paragraph 27)	...	...	14
"	63	The University should commence with the Faculties of Arts, Science, Law, and a department for the Training of Teachers subordinate to the Faculty of Arts	...	...	15
"	64	Courses of instruction provided by the University	...	...	15
"	65	Courses of instruction provided by each College ..	...	...	15
"	66	Limitation of size of Colleges in Nagpur	...	...	15
"	67	Limitation of size of external Colleges	...	...	15

Notes.

"	68	Details of the number of students in each College	...	15
"	69	The estimate of the number of students provides for an increase of 850 students, <i>i. e.</i> , from 1,100, the present number, to 1,950.	...	16
"	70	Distribution of students among the Faculties	...	16

COURSES AND METHODS OF INSTRUCTION, EXAMINATIONS.

Recommendations.

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"	73	Conditions of admission to the degree courses in Arts and Science.	...	16
"	74	Conditions of admission to the Postgraduate courses in Arts and Science	...	17
"	75	Conditions of admission to the courses for the degree of Bachelor of Law, and for the Licentiate of Teaching	...	17
"	76	Subjects of study in the Intermediate course in Arts	...	17
"	77	Methods of instruction in the above course	...	17
"	78	Subjects of study in the B. A. Pass course	...	17
"	79	Methods of instruction in the above course	...	17
"	80	Subjects of study in the B. A. Honours course. The course should include one principal and one subsidiary subject	...	18
"	81 & 82	Alternative courses	...	18
"	83	Methods of instruction in the above courses	...	18
"	84	The M. A. course should consist of a single subject	...	18
"	85	Methods of instruction in the above course	...	18
"	86	Subjects of study in the Intermediate course in Science	...	18
"	87	Methods of instruction in the above course	...	18
"	88	Subjects of study in the B. Sc. Pass course...	...	18
"	89	Methods of instruction in the above course	...	18
"	90	Subjects of study in the B. Sc. Honours course. The course should include one principal subject, and one or two subsidiary subjects	...	18
"	91	Methods of instruction in the above course	...	19
"	92	The M. Sc. course	...	19
"	93	Methods of instruction in the above course	...	19
"	94	The degree of Doctor of Arts and Science	...	19
"	95	No student should be admitted to a public examination unless he has attended a full course of instruction	...	19

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V	96	The Intermediate examination in Arts and the B. A. Pass examination should be written examinations	19
"	97	The Intermediate examination in Science and the B. Sc. Pass examination should be conducted partly by means of papers and partly by tests in practical work	19
"	98	Successful candidates in the above examinations should not be graded, but distinctions should be given for proficiency in particular subjects	19
"	99	The B. A. and B. Sc. Honours and the M. A. and M. Sc. examinations should not be conducted by means of papers. Nature of the above examinations	19
"	100	Candidates for the M. A. and M. Sc. degree, who have not attained an Honours degree, should take a qualifying examination before proceeding to the M. A. and M. Sc. courses proper. This qualifying examination should be conducted by means of papers	19
"	101	Successful candidates in the B. A. and B. Sc., and the M. A. and M. Sc. examinations should be graded in three classes	19
"	102	An oral examination may be held in connection with the thesis presented by a candidate for the degree of Doctor	19
"	103	No student should be admitted to a course of instruction unless he is qualified to profit by it	19
"	104	<i>E. g.</i> , (i) a student should not be permitted to take Philosophy for the B. A. degree unless he has completed the Intermediate course in Logic	19
"	105	(ii) A candidate for Honours in any subject should previously have gained distinction in that subject in the Intermediate examination	20
"	106	Subjects of study for the degree of Bachelor of Law	20
"	107	The LL. B. course should be a three years' course	20
"	108	Methods of instruction in the above course	20
"	109	The LL. B. Examinations	20
"	110	Subjects of study for the degree of Master of Law	20
"	111	The LL. M. Examination	20
"	112	The degree of Doctor of Laws	20

Notes.

"	113	The minimum age for matriculation, which is recommended, is the same as that prescribed by the University of Allahabad	21
"	114	List of subjects in which it is recommended that the University shall provide courses of instruction	21
"	115	Provision is made in the estimate of teaching staff for instruction in the Vernaculars up to the Intermediate standard. The whole question of Vernacular studies may be left to the University for a more comprehensive consideration	21
"	116	Elementary Economics is included, as an alternative subject, in the Intermediate course in Arts. The main purpose of this course will be to acquaint the student with the main facts of economic life in India, without a knowledge of which the study of economic theory is unprofitable. It will also be a preliminary training for advanced study and research in Indian Economics	21
"	117	The courses suggested for the Honours degree in Arts are intended to ensure a certain amount of specialization without neglecting general culture. The Pass course in English is not necessary for Honours students	21
"	118	The M. A. courses will provide a direct training in methods of research. They will be open to ex-students of External Colleges	22

Chapter.	Paragraph.		Page.
V	119	Instruction in the Honours and M. A. courses will centre in the University seminars. Special facilities for research should be provided by the local museum ...	22
"	120	Provision is made in the scheme for the preliminary training of students intending to proceed to Medical Colleges in other Provinces ...	22
"	121	The conditions of Honours and Postgraduate work will be favourable for the abolition of written examinations. The award of Honours and Postgraduate degrees will depend primarily upon the recommendation of the teachers, but specific tests of the fitness of students for the degrees will be provided by requiring them to submit a thesis, and by the institution of an oral examination, in which the teachers of the University will be assisted by external examiners ...	22
"	122	The main features of the Committee's scheme of Law studies are :—(i) the importance attached to the scientific study of Law, (ii) the institution of small tutorial classes to supplement formal lectures, (iii) the establishment of day classes, (iv) the appointment of whole-time teachers ...	23

THE TRAINING COLLEGE.

Recommendations.

VI	123	The Training College at present contains a Collegiate department and a Secondary department. The former only should be affiliated to the University, the latter should remain under the Education Department ...	23
"	124	In view of the difficulty of apportioning the expenses of the College between the Collegiate and Secondary departments, the financial administration of the College should remain under the Education Department ...	24
"	125	The Collegiate Department should be subject to the control of the University as regards courses of study, examinations, conduct and residence of students ...	24
"	126	Proposed Course of instruction for the L. T. degree ...	24
"	127	The teaching staff should consist of the Principal, who will be a member of the Indian Educational Service, and four assistants in the Provincial Educational Service ...	24
"	128	This Staff will suffice for a class of 30 students ...	24
"	129	The Head Master of the Practising School should be a member of the Indian Educational Service ...	24

TEACHING STAFF, ARTS, SCIENCE AND LAW.

Recommendations.

VII	130	The teachers of the University and the Incorporated Colleges should be, with a few exceptions, members of the Government Educational Service whose services are placed at the disposal of the University ...	25
"	131	The above teachers should be graded in three divisions, corresponding to the present divisions, <i>viz.</i> , (i) the Indian Educational Service, (ii) the Senior Collegiate Service, (iii) the Junior Collegiate Service ...	25
"	132	The salaries of the teachers in each division should be determined by Government ...	25
"	133	The salaries of teachers in Affiliated Colleges should be fixed with reference to the salaries of teachers in Incorporated Colleges. ...	25
"	134	Academic classification of teachers :—(i) University Professors, (ii) College Professors, (iii) Lecturers, (iv) Tutors and Demonstrators ...	25
"	135	All persons at present holding the title of Professor should continue to be so called ...	25

Chapter.	Paragraph.	Page.
VII	136 Number of hours of instruction per week assigned to teachers...	25
"	137 The duties of Principals of Colleges should be mainly administrative	25
"	138 The staff required for instruction in Arts and Science subjects in Nagpur will be 98 (or, including the Principals of the three Colleges, 101)	25
"	139 The 98 teachers should be distributed among the three divisions as follows :— (i) 26 Indian Educational service or corresponding grade in the Hislop College, (ii) 34 Senior Collegiate service or corresponding grade in the Hislop College, (iii) 38 Junior Collegiate service or corresponding grade in the Hislop College. The Principals of the two Incorporated Colleges should be members of the Indian Educational Service.	26
"	140 The 98 teachers should be divided among the three Colleges and the University as follows :— <div style="margin-left: 100px;"> University 42 Morris College... .. 19 Craddock College 19 Hislop College 18 </div>	26
"	141 The teachers of Science subjects should be subject solely to the control of the University	28
"	142 Teachers of Honours and Postgraduate subjects should be selected by the Syndicate from the College staffs	28
"	143 All teachers should be regarded as members of Colleges, and should be eligible for membership of the College Councils	28
"	144 The Law staff should consist of five teachers specially appointed by the Government on the recommendation of the Syndicate	28
"	145 University Readers should be appointed to deliver special courses of lectures	28
"	146 The Robertson College, Jubbulpore, will require a staff of 27 teachers, including the Principal. Four should be members of the Indian Educational Service, 13 of the Senior Collegiate service and 10 of the Junior Collegiate service	28
"	147 The King Edward College, Amraoti, will require a staff of 23 teachers, including the Principal. Three should be in the Indian Educational Service, 11 in the Senior Collegiate service, and 9 in the Junior Collegiate service	29
<i>Notes.</i>		
"	148 Reason for the substitution of the terms "Senior Collegiate" and "Junior Collegiate" service for "Provincial Educational" and "Subordinate Educational" service.	29
"	149 The rates of pay, adopted in the financial estimate, for the three divisions are as follows :— <div style="margin-left: 100px;"> Rs. (i) Indian Educational Service ... 500—50—1,000 (ii) Senior Collegiate Service ... 200—20—500 (iii) Junior Collegiate Service ... 80—8—200 The two first are the present rates of salary; the last is higher than the present rate of salary of the Subordinate Educational Service. </div>	29
"	150 Members of the Junior Collegiate service should be recruited from graduates of the University who have shown a capacity for research	30

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VII	151	The salaries and prospects of the teaching staff of the Hislop College should be such as to attract a body of efficient teachers	30
"	152	Reasons for restricting the number of hours' instruction to be assigned to the teachers	30
"	153	The factors upon which the estimate of the teaching staff for Arts and Science subjects is based	30
"	154	The Principals of Colleges should be regarded as supplementing the teaching staff	31
"	155	An inter-collegiate system of lectures in the Intermediate and Pass courses will prevent overlapping and waste of staff	31
"	156	The proportion of teachers to students in Nagpur will be one teacher to slightly more than 10 students; in the Robertson College one teacher to rather more than 14 students; and in the King Edward College one to rather less than 14	31
"	157	Each College in Nagpur is given, as far as possible, the same number of teachers in each grade or rank of service. But the exact strength of the teaching staff of the Hislop College will depend upon the resources of the Mission	31
"	158	Factors upon which the estimate of the Law teaching staff is based. Law teachers should be appointed by Government, but should not be members of the Government Educational Service	32

UNIVERSITY CONSTITUTION.

Recommendations.

VIII	159	The government of the University should be vested in a Chancellor, Vice-Chancellor and Senate	32
"	160	The Chief Commissioner of the Central Provinces should be the Chancellor	32
"	161	The Vice-Chancellor should be an honorary officer	32
"	162	The Senate should consist of the Chancellor, the Vice-Chancellor and 75 members	32
"	163	The <i>ex-officio</i> members of the Senate should be 8	32
"	164	There should be 38 members of the teaching staff on the Senate, 21 representing the Faculties, and 17 the College teaching staffs	33
"	165	Election of members of the Senate by registered graduates	33
"	166	The period of membership of the Senate should be five years	33
"	167	Powers of the Senate	33
"	168	Submission of Resolutions of the Senate to the Local Administration	33
"	169	The Local Administration should receive copies of all proceedings of the Senate	33
"	170	The Syndicate should be the executive of the University	33
"	171	Composition of the Syndicate	33
"	172	Duties and functions of the Syndicate	34&35
"	173	The period of membership of the Syndicate should be three years	35
"	174	Subjects or groups of subjects for which Boards of Studies should be constituted	35
"	175	Composition, and method of appointment, of Boards of Studies.	35
"	176	Duties of the Boards of Studies	35
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VIII	178	The period of membership of the Boards of Studies should be three years	36
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"	191	Fellows who are not members of the teaching staff should not be eligible for a seat on the Senate	37
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<i>Notes.</i>			
"	193	The management of Colleges maintained from public funds will be vested in the University, and the Syndicate, as the executive body of the University, will take the place of the Director of Public Instruction as the controlling authority in the administration of these Colleges. The Training College, however, will still be administered by the Education Department	38
"	194	The University will correspond with the Local Government directly on all matters except those relating to the permanent staff. In matters relating to the permanent staff, the correspondence will be conducted through the Director of Public Instruction	38
"	195	It will be necessary in the early years of the University that the Principals of all Colleges should be members of the Senate. But when the number of Colleges increases, the number of Principals of Colleges on the Senate need not necessarily expand	38
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"	206	Medical attendance should be provided ...	40
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"	226	Non-collegiate students will enjoy the same facilities as regards instruction as students who reside in College. Their separate organization will be for social and disciplinary purposes ...	44

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"	236	The proposed scheme of physical education is taken from American Universities	45
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A.—LIBRARIES AND MUSEUMS.

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"	249	Estimate of expenditure on Libraries	46
"	250	Relations of the Second Class Scientific Library with the University Library	46
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A.—FEES.

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"	268	Games, club and common room fees	48
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"	273	In return for the residential fee, students will be provided with rooms, furniture, light, medical attendance and service	49
"	274	The games fees will only partly cover the expenditure on games. The common room and club fees will defray expenses	50
"	275	Suggested rates of remuneration for examiners. The fees will cover the expenditure on examinations	50
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"	277	Cost of living in College to the poor student	50

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		(ii) 25 University scholarships for candidates for Honours.				
		(iii) 15 Senior College scholarships for candidates for Pass degrees.				
		(iv)&(v) 10 University scholarships for candidates for the degree of Master.				
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"	310	General accommodation required ...	55
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"	317	The site and building plans are being considered by the Education Department. The Committee submits no detailed plans of buildings ...	56
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"	321	An estimate of capital expenditure is contained in Appendix VII.	56
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<i>Capital Expenditure (see Appendix VII).</i>			
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	(i)	University and Colleges in Nagpur ...	73,64,180
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		Total ...	97,75,971
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	(ii)	Robertson College, Jubbulpore ...	1,67,782
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		Total ..	11,71,855
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"	334	The estimate of contingencies ...	60
<i>The Financial position of the Hislop College.</i>			
"	335	An estimate of capital expenditure for the Hislop College is prepared, but not an estimate of recurring expenditure ...	60
"	336	The Committee make no recommendation with regard to the amount of the grant which the Government should make to the Hislop College. The College deserves generous treatment ...	60



REPORT OF THE CENTRAL PROVINCES AND BERAR UNIVERSITY COMMITTEE.

CHAPTER I.

PRELIMINARY..

1. Under instructions contained in the Resolution of the Central Provinces Administration No. 682, dated the 8th July 1914, appointing the University Committee, we are called upon to frame a scheme which shall provide for a University of the teaching type at Nagpur, or in its immediate neighbourhood, and for the affiliation to this central institution of colleges situated in other places in the Central Provinces and Berar.

2. We held eight sittings in Nagpur from the 23rd July to the 1st August for the preliminary discussion of general principles, and in two subsequent meetings on the 9th and 10th September laid down the main lines of our proposals, and appointed a number of Sub-Committees to elaborate the details. Our report is very largely based on the recommendations of these Sub-Committees, and we here desire to express our most cordial thanks and acknowledgments to the able and distinguished gentlemen whose advice we sought, for the readiness with which they responded to our appeal and for the invaluable assistance which they rendered. A list of the Sub-Committees with the names of the members is given in Appendix I.

3. We also consulted various authorities whose names are given in Appendix II, on certain problems involved in our scheme, and we take this opportunity of expressing our obligations to these gentlemen for the services which they so freely gave.

4. We held our third session from the 21st to 23rd December to consider the reports of the Sub-Committees, which had previously been circulated among the members.

5. Our last meetings were held on the 8th and 9th March when we considered our final report.

6. We are instructed "to draw up our scheme in a form which will enable it to be placed before the Government of India and to submit a financial estimate with all the requisite detail both for the Central University and, where necessary, for the external colleges." We have endeavoured, as far as possible, to comply with these directions. We have gone into considerable detail as regards both capital and recurring expenditure, and we feel that the estimates contained in Appendices VII and VIII indicate with a fair approach to accuracy the probable cost of the scheme.

CHAPTER II.

THE PRESENT ORGANIZATION OF UNIVERSITY EDUCATION.

7. The oldest collegiate institution in the Central Provinces is the Government College at Jubbulpore. This institution which originated in a high school at Saugor to which college classes were subsequently added, was established in Jubbulpore in 1873. Next in order of time comes the Hislop College at Nagpur, which was founded by the United Free Church Mission in 1883. This college also took its rise from a high school, established as far back as 1846 by the well known missionary and geologist, the Reverend Stephen Hislop, to whose zeal and energy are largely due the first stirrings of the movement for the education of the people of these Provinces. Under the influence of the missionary institution, the praise of good learning spread. About the same time a movement in favour of higher education was initiated by the leading

Historical retrospect.

representatives of the southern districts, and in 1885 the Morris College was established in Nagpur in memory of the late Sir John Morris, who held the post of Chief Commissioner for so many years.

8. These three institutions were unable to satisfy the claims of science which were every year becoming more urgent. Public opinion began to demand increased facilities for education in science, and the popular feeling found expression in the establishment in 1905 of a technical institute in Nagpur in memory of the late Queen Victoria. In the following year classes were opened for the instruction of the students of the Morris and Hislop Colleges in physics and chemistry, and in 1908 these classes were raised to the status of a college known as the Victoria College of Science.

9. Meantime the demand of the Education Department for trained teachers in the schools had resulted in the foundation of the Training School in Jubbulpore which in 1911 became a college.

10. This brief retrospect would be incomplete without some mention of other educational developments which, though not strictly relevant to our scheme, are yet of considerable interest as showing the future possibilities of university education in the Central Provinces. In 1906 the School of Agriculture which had been established in Nagpur in 1888 was raised to the status of a college. In 1914 the Medical School for the training of sub-assistant surgeons was started and in the same year the Engineering School was opened. Both these institutions are in Nagpur.

Present standards
of instruction.

11. The three Arts colleges, the Victoria College of Science and the Training College at Jubbulpore are affiliated to the Allahabad University—the Hislop and Morris Colleges up to the B. Sc. and M. A. standard, the Jubbulpore Arts College up to the B. A. and B. Sc., the Victoria College up to the D. Sc., and the Training College up to the L. T. The Victoria College at first provided courses of instruction only for students of the Hislop and Morris Colleges who had previously passed the Intermediate examination, but in 1912 it took over the Intermediate Science classes of the Morris College. The post-intermediate courses are attended by students of the Morris and Hislop Colleges, the Intermediate courses by the students of the Morris College alone, the Hislop College undertaking the instruction of students in the lower stage. Attached to the Morris College are Law classes in which instruction is given up to the LL. B. standard. The Training College at Jubbulpore is a twofold institution, providing a two years' course of instruction for undergraduates, leading to the diploma awarded by the Education Department, and a one year's course for graduates preparing for the L. T. degree. The institution is affiliated to the Allahabad University only in respect of the latter course of instruction.

Present number
of students.

12. The strength of the colleges in the year 1914-15 is as follows :—

	Number of students.
Hislop College	430
Jubbulpore College	230
Morris College	286
Morris College (Law Department)	140
Training College (undergraduates)	56
„ „ (graduates)	8

The Victoria College has on its rolls 79 students drawn from the Morris and Hislop Colleges.

Present sites and
buildings.

13. The Hislop College is situated in the city of Nagpur, and, although additions have been made from time to time, the buildings will not satisfy the requirements of our scheme, while there is little possibility of expansion except at a prohibitive cost. About sixty students live in the College hostel, and no more can be provided for in the existing building. The playing field is a considerable distance away. The Morris College was transferred in 1910 from the

city to the old Residency, a historic building immediately below the famous Sitabaldi Fort. It possesses a fine hostel containing accommodation for some 120 students, and the playing field is close at hand. But the old Residency is unsuitable for college purposes, and has already ceased to provide adequate accommodation for the ever-increasing number of students. The Victoria College of Science is situated in the picturesque Maharajbagh, and its habitation is incomparably finer than that of any other educational institution in the Province. It is also within easy walking distance from the Morris College which supplies it with a large portion of its students. But the College has always been considered a usurper in the Victoria Technical Institute building which was originally meant to be the home of technical and agricultural education, and the Agricultural College authorities in particular have long looked forward to the time when they could enter into their own.

14. The Jubbulpore Arts College is at present situated on the outskirts of the Civil Station near the city, with the Training College in its immediate neighbourhood. The buildings are cramped and unsuitable, and the hostels cannot comfortably accommodate even their eighty students. The Government, in response to the popular demand, decided some time ago to transfer the Arts College to more suitable surroundings, and make it, as far as possible, a completely residential institution. The site selected is about four miles from the city. Building operations, which began in 1913, will probably be completed by the close of the present year, when the college will take up its new abode. The buildings comprise the main college structure with residential accommodation for 150 students, physical and chemical laboratories, a hostel for 50 students, and quarters for the teaching staff. While the needs of the Government College are thus amply provided for, the Training College will also be benefited, for that institution will occupy the vacated buildings in the suburb of Jubbulpore.

15. Hitherto collegiate institutions have been divided between Nagpur and Jubbulpore, the head-quarters of the northern and southern divisions of the Province, respectively. Nagpur, as the seat of the Government, has naturally attracted the larger number of colleges. But Jubbulpore has always sturdily maintained its position as an educational centre. Indeed, there are certain marked differences between the northern and southern portions of the Province which render it natural and inevitable that the students of the latter should gravitate to Jubbulpore. The needs of Berar.

16. The recent inclusion of Berar under the administration of the Central Provinces introduced a new element into the educational problem. Though racially and linguistically akin to the inhabitants of the Nagpur country, the people of Berar, before the incorporation, looked rather to Bombay and Poona than to Nagpur for collegiate education, and, although they have now taken a definite place in the Province, they are by no means contented with their educational dependence, and have long wished to have a college of their own. An opportunity for the realization of this ambition presented itself in connection with the movement for a memorial to the late King Edward, the proposal to establish a college arising out of the discussions of the Central Committee of the Memorial Fund as to the object to which the subscriptions should be devoted. The fund amounted at the time to about one and a half lakhs, and the Marwari community undertook to provide an additional one lakh towards the building of an Arts college. The proposal that the Government should establish and maintain such a college if the two lakhs raised by subscriptions were contributed towards the buildings and equipment met with the approval of the Hon'ble the Chief Commissioner, and the general outlines of a scheme providing for the foundation of a college for 250 and a hostel for 100 students at Amraoti, the head-quarters of the Berar Division, and for the affiliation of this institution to the Allahabad University up to the B. A. degree and the Intermediate standard in Science were also accepted. A site has been selected, but the preparation of buildings plans has been delayed pending the recommendations of the University Committee. These facts we have taken into our consideration, and our recommendations regarding the college do not conflict with the general proposals that have already been approved.

CHAPTER III.

GENERAL FEATURES OF THE PROPOSED UNIVERSITY.

The type of university proposed.

17. There are few spheres of public policy in which Indian ideals have made such progress as in the matter of university education. It is nearly sixty years since the scheme of a purely examining university was imported into India; and there are many signs to show that this country is not less dissatisfied with its standards and results than the English educationists to whose predecessors the London University was due. Like the model on which they were founded, the universities of India did not, in the first fifty years of their existence, themselves provide instruction nor did they attempt to guide and control the teaching of the colleges which they affiliated. Still less did they concern themselves with the character, conduct and discipline of their alumni. All they were concerned with was the holding of examinations and the conferment of degrees.

18. Two results flowed from this conception of a university. On the one hand "a confusion arose in the public mind between a university education and a university degree, and people believed that any one who had the latter had also received the former." No belief could have been further from the truth. For, though in some institutions the education was of a high character, it must be admitted that the training on the whole lacked the distinguishing marks of university education. In the majority of cases, it was not a training of the mind so much as a training of the memory, and knowledge was pursued not so much for its own sake, with a view to its extension, as with reference to the external examinations.

19. The second result was the almost total neglect of the life and character of the students. Teachers, no doubt, there were who interested themselves in the doings of their pupils outside the lecture room. Some colleges provided hostels and took care that their students lived under conditions favourable to physical and moral development. But efforts in this direction were isolated and spasmodic. There was no central organization to direct, control and co-ordinate the activities of the various colleges. The universities did not regard this as one of their functions.

20. But opinion has changed in recent years, and under the stimulus of the Universities Act of 1904, people have begun to be dissatisfied with the conditions of university education, as they are at present. They have come to see that a university should be something more than a mere examining body; that it should take a share not only in the organization and control of teaching, but in the actual work of teaching; and that it should pay attention to the social and physical, as well as the intellectual, needs of its students. The various university projects which have been put forth in the last few years reflect and accentuate this higher conception of the functions of a university, and we feel that no scheme which we put forth will meet with acceptance unless it makes an attempt to realize in full measure the ideals of university education which now prevail.

21. In determining the type of university most suitable for these Provinces, we have carefully borne in mind the instructions contained in the Resolution of the Local Administration to which reference has been made. While fully realizing the advantages of concentration, we appreciate the decision of the Government that a completely centralized university would be inadvisable in the stage of educational progress which the Provinces have now reached. We cannot afford to break wholly with the past, and it would be fatal to disregard the present lines of development. On the one hand, the importance of Nagpur as the capital of the Provinces, and a great educational centre, marks it out as the natural home of the University. But, on the other hand, the traditions which have grown up round the colleges at Jubbulpore and the hopes which are centred in the proposed college at Amraoti cannot be ignored. In these circumstances, we feel that the Government have made a wise decision in electing to establish a University in Nagpur, embracing colleges situated in that centre and in other parts of the Provinces. For we must not neglect the possibility of future developments. The increase in the number of university

students has been singularly rapid in the last few years, and there is every reason to suppose that the rate will be accelerated in the years to come. A single university will not suffice the people of these Provinces for ever. A time will come when the university, now to be established, cannot, without surrendering some of its powers of control and organization, include within its scope more colleges, and when the foundation of new universities will demand serious consideration. The colleges at Jubbulpore and Amraoti will not only supply immediate wants, but will also form the centres of the new universities which we may hope to see established in the future. It is better that the new universities, if they come, should grow naturally out of existing institutions than spring ready-made from the brain of some university constructor.

22. But, though in outward appearance the Central Provinces and Berar University will present some of the features of an affiliating university, it will, according to our scheme, be possessed of functions and endowed with responsibilities which transcend the scope of those universities in India which conform to that type. For it will not only be an examining but a teaching university, and its teaching activities will not be limited to the provision of courses of instruction for post-graduate degrees, but will embrace several departments of study in the lower courses. The main difference, however, between the university which we propose and existing universities will lie in the closer relations of the former with its constituent colleges. According to our scheme, the University will exercise an effective control over the teaching and discipline of all the institutions which come within its jurisdiction. For it is only by exercising control over its component parts that the University can maintain a high standard of moral and intellectual endeavour, and create traditions which will make themselves felt in the development of the Provinces as a whole. The extent of the University's authority will vary according to the character of the institution which comes under its jurisdiction. In the case of colleges which are under private management, it will be limited to a general but effective control in all matters affecting instruction and discipline. For example, no private college will be permitted to undertake instruction in any subject of study unless it possesses a qualified staff. Over colleges provided by public funds, [with the exception of the Training College (see Chapter VI)], the powers exercised by the University will be considerably greater, and the governing body of the university will stand to them in much the same relation as the Local Government stands at present. In a word, they will be directly administered and managed by the University. We may express the distinction between these two classes of colleges by saying that the former will be Affiliated, and the latter Incorporated, institutions. We must point out, however, that this distinction is for administrative purposes only, and that both classes of colleges will have the same status in the University.

Functions and powers of the University.

23. The essential difference in the relations of these two kinds of institutions to the University will appear in the proposals which we make with regard to the appointment and control of the members of their teaching staffs. The teachers of the affiliated colleges under private management will be directly appointed and controlled, as they are at present, by the college authorities, and will be subject to the jurisdiction of the University only in so far as it is necessary for that body to secure efficiency of instruction and discipline. The teachers (and administrative officers) of the University and the incorporated colleges, on the other hand, will be appointed by the University, and will be, in the strictest sense of the term, in the service of the University. The teachers appointed by the University will fall into two classes. On the one hand, there will be the permanent members of the staff—men who will devote their lives to the service of the university. These will constitute the great majority. On the other hand, there will be a few teachers who will hold temporary appointments, such as University Readerships for the instruction of advanced students in special courses. This distinction of tenure will, in our opinion, necessitate a difference in the mode of appointment. Appointments to temporary posts may well be placed directly in the hands of the University. But in the case of the permanent staff, we consider that the main responsibility for their appointment should lie with Government which alone can offer that security of tenure which is so important a factor in attracting and retaining the services of the right

The teachers of University and its Colleges.

type of teacher. We, therefore, recommend that, while members of the permanent staff should be, strictly speaking, appointed by the University, they should be Government officers, whose services are placed at the disposal of the University. Such officers may already hold posts in Government service or may receive their first appointments from Government for the special purpose of being lent to the University.

Financial autonomy.

24. It will be obvious from what has been stated above that the University, which we propose, will possess powers which will entitle it to a high place in the administrative machinery of the Provinces. But administrative autonomy involves a certain measure of financial independence, and we have made proposals accordingly. It is true that the University will be mainly dependent on the Government for financial support. Apart from fees, the University, at first at any rate, will have no resources of its own. But we confess to a desire to see it vested with financial control over the grant which it receives from Government as well as over its other receipts. If we may be permitted to employ a simile, the Government should regard the University as a business concern, of which it is a shareholder with a seat on the Board of Directors rather than as a servant to whom it makes certain payments, the disposal of which must be checked frequently and in detail.

The government of the University.

25. We recommend that the administration of the University be vested in a Chancellor, Vice-Chancellor, Senate and Syndicate. The Chief Commissioner of the Province will be the Chancellor. The Vice-Chancellor will be an honorary officer nominated by the Chancellor. The Senate will be the supreme authority, subject to the general control of the Government. It will be a body of 75 members, consisting partly of representatives of Government and of the general public, partly of elected representatives of the graduates, and partly of teachers of the University and the constituent colleges, the latter being nominated by the Chancellor. The Syndicate will be the executive of the University, and will consist of the Vice-Chancellor, the Director of Public Instruction, a member of the Senate nominated by the Chancellor, four Principals of colleges, the Deans of the Faculties, and three members elected by the Senate from among their own number, of whom not more than one shall be a member of the teaching staff. The Chancellor's nominee on the Syndicate should be a person possessed of general administrative experience. In both these bodies the members of the teaching staff will predominate.

Predominance of the teachers.

26. The efficiency of an institution is vitally dependent upon the way it is governed, and the provision of a constitution which will secure the most efficient working of the University has been one of our most anxious problems. After careful consideration, we have arrived at the conclusion that a university possessing the wide administrative and educational powers which we propose must be governed by a body in which professional and expert opinion will predominate. This we think we have secured by giving the members of the teaching staff a predominant voice in the counsels of the University. Under their influence we may rest certain that that body will not be unduly swayed by extraneous interests. At the same time, the presence of a large lay element in the government of the University in the shape of representatives of Government and of the general public will effectually prevent it from attempting to achieve ideals, which, however excellent in theory, are often impracticable and sometimes detrimental to the public interests. Finally, the activities of the University will be subject to the general control of the Local Administration.

Colleges and Departments.

27. The University for which we make provision in our scheme will comprise the following colleges :—

In Nagpur—

The Hislop College.
The Morris College.
The Craddock College.
The Non-Collegiate Institution.

In Jubbulpore—

The Robertson College.
The Training College.

In Amraoti—

The King Edward College.

The Victoria College of Science and the Law School attached to the Morris College we propose to transform into university departments. Thus the University will comprise all existing institutions, and two new colleges—one in Nagpur and one in Amraoti. In response to the unanimous wish of the people of Berar, we respectfully propose that the latter should be named the King Edward College in memory of the late King Edward the Seventh. We suggest that the former should be called the Craddock College after Sir Reginald Craddock, late Chief Commissioner of the Central Provinces, who was for so many years closely associated with Nagpur. We trust that Sir Benjamin Robertson, the present Chief Commissioner, will permit his name to be given to the college at Jubbulpore in which he has always taken such a deep and enthusiastic interest. These three institutions, together with the Morris College, will be incorporated with the University. The Hislop College will be an affiliated institution under the management of the United Free Church Mission. The Training College also will be an affiliated college, the Government retaining the management for reasons which are described in paragraphs 123 and 124.

28. We have already indicated (see paragraphs 14 and 16) that the colleges at Jubbulpore will soon be provided with adequate buildings, and a site has been selected for the college at Amraoti, and no more need be added to what we have already said about them in this connection. A brief reference, however, may be made to the location and buildings of the University and the colleges in Nagpur. It is an essential part of our scheme, as will presently appear, that the University and colleges should be concentrated in one area. We have accordingly selected a site, situated to the south-east of the Civil Station, on the north-west side of the road which runs from Nagpur to Kamptee. It comprises a considerable area much of which lies on high ground, and is suitable for building purposes. It has also the advantage of easy access from the city, being less than two miles distant from the centre of the Itwari Bazar, and is near enough to the Civil Station to prevent any sense of isolation. The selection of this site as the University area will involve the transference of the Hislop and Morris Colleges from their present buildings. But, as we have already shown, these buildings have for some time been regarded as inadequate for college purposes, and, in proposing their abandonment, we are only hastening a step which in a few years would inevitably have to be taken. It may be added that we considered the possibility of locating the central offices of the University in the Civil Station, in the neighbourhood of the Legislative Council building, where they would serve to emphasize the character of Nagpur as a university town. But, for administrative reasons, it seemed to us that the concentration of all the university buildings in a single area was essential.

The site of the University.

29. The importance of concentration in Nagpur will appear from a consideration of the relations which according to our scheme will subsist between the University and the colleges. The colleges will be residential institutions, and their most important function will be to provide their students with facilities for a corporate life, and the moral, social and physical development which such a life engenders. They will also have teaching functions, but there will be the closest possible co-operation between the University and the colleges, and among the colleges themselves in providing courses of instruction. In their relations to one another and to the University, the colleges will resemble the colleges of Oxford and Cambridge. Thus a student of any college will reside in that college, be amenable to its discipline and derive from it all the moral, social and physical advantages which it has to offer. But he will also be able to enjoy, as a member of that college, instruction in any of the courses provided by the University and will be able to attend such inter-collegiate lectures as are arranged. Students who do not enter into residence in college will be members of the Non-Collegiate institution. They will enjoy the same facilities in the shape of instruction as college students, but for social, disciplinary and other purposes, they will be provided with a separate organization under the control of the University.

Faculties.

30. We recommend that the University shall contain, at its inception, Faculties of Arts, Law and Science, and a department for the training of teachers subordinate to the Faculty of Arts. We have considered the question of establishing a Faculty of Agriculture. But in view of the necessity which the Government Department of Agriculture feels of pursuing a tentative policy for some years to come with regard to agricultural education, we feel that it would be inadvisable at the present juncture to suggest that the University should make provision for instruction in this branch of knowledge. As to the Medical and Engineering Schools, they are designed to meet certain special needs, and do not aim at providing courses of a university standard. It will be many years before the demand for higher courses will justify the establishment of Faculties in Medicine and Engineering.

Division of teaching between the University and the colleges.

31. The University and the colleges will share between them the teaching in the Faculties of Arts and Science, the more advanced courses being provided by the former, while the University alone will undertake the teaching of Law. The training of graduate teachers will be conducted by the Training College at Jubbulpore subject to the control of the University.

The teaching of Science.

32. As regards Science, it is obvious that economy and efficiency of teaching will be secured by concentration in the University, and accordingly we recommend that the University shall provide courses of instruction in all the stages of study. It will be open, however, to the affiliated college in Nagpur to make provision for science teaching, if it chooses to incur the increased expenditure which it must necessarily entail. With the colleges outside Nagpur the case is different. It would be unfair to make their students leave the local institutions in order to take the less advanced courses in Science. A further differentiation must be made between the Jubbulpore and Amraoti colleges. The Jubbulpore College already teaches up to the B. Sc. Standard in Physics and Chemistry, and considerable sums have been laid out on the construction and equipment of laboratories. For these reasons, we recommend that this college should continue to provide courses of instruction leading to the B. Sc. (pass) degree. The Amraoti college, on the other hand, has not yet come into existence and we have no means of judging whether the establishment of Science courses will prove sufficiently popular to justify the large expenditure which it will involve. In this case, therefore, considerations of economy point the other way, and we concur with the proposal, already adopted in accordance with local opinion, that the college should confine itself, for the present, to courses of instruction in Physics and Chemistry up to the Intermediate standard, and that those of its students who desire to pursue the study of these subjects in the higher stages should go to Nagpur for the purpose.

Honours courses.

33. Until comparatively recent years the universities in India made no attempt to establish separate Honours courses for the degree of Bachelor. This was perhaps excusable in days when the general standard of instruction was low, and the intellectual ambition of students was usually limited to the passing of examinations. But standards have changed of late years and new ideals have come to the front. It is now generally recognized that a course of studies which taxes the abilities of one student to the utmost may be child's play to another, and that what is wanted is differentiation of studies suited to the differences in mental power of different classes of students. Hence the universities of the west have instituted two kinds of courses for the degree of Bachelor, Honours courses for the more able, and Pass courses for the less able, of their students, and they encourage all the more brilliant students to take the former. Most of the Indian universities, while recognizing the wide differences in mental calibre between students, have not yet gone to the length of establishing courses for the degree of Bachelor absolutely different in kind, but have compromised by adding a few extra papers in the examinations for those who are candidates for Honours. The University of Madras, however, has effected a complete divorce between honours and pass courses, and in the schemes for the establishment of Universities at Dacca and Patna a step is made in the same direction.

Reasons for instituting Honours courses.

34. We strongly recommend the institution of Honours as well as Pass courses for the degree of Bachelor in Arts and Science, and the scheme of studies which we suggest involves a clearly marked differentiation between the

two kinds of courses. Our reasons for proposing a complete bifurcation are based on two main considerations, one affecting the students and the other the teaching staff of the University. As regards the former, it is an essential function of the University to afford scope for the development of all that is best in its students, and therefore it should consider the intellectual needs of its more gifted members no less than the requirements of those who are endowed with only average abilities. The latter will no doubt predominate in numbers. Students of real intellectual worth will be comparatively rare. But their value to the country bears no proportion to their relative number, and the country must, through its agent, the University, make the very most it can of them. On the one hand, the University must impose no undue strain on the resources of the average student. On the other hand, it must devote proper attention to the special gifts and aptitudes of the exceptional student. The country is beginning to awake to the need of intellectual excellence: it is the duty of a University to meet the need as far as it lies within its power. As regards the teaching staff, the quality of its personnel depends in no slight degree upon the character of the work it has to perform. The higher and more interesting the duties they are called upon to fulfil, the better qualified are likely to be the teachers. The Honours courses will be sufficiently advanced to provide scope for the highest scholarship, and we consider that the prospects of interesting work which they offer will not fail to attract to the service of the University scholars of considerable distinction.

35. It is clear that courses of instruction for Honours and postgraduate degrees cannot for the present be provided by the colleges outside Nagpur. For this would virtually mean the establishment of a teaching university in each centre, and such a plan, besides adding enormously to the expense of the scheme, would almost certainly fail in its purpose. A successful organization of higher studies presupposes the close co-operation of a number of highly qualified scholars to control the teaching and to maintain its standard, and these can only do their best work in the atmosphere that will be created by a considerable body of students imbued with the desire of knowledge for its own sake, and not with reference primarily to the examinations. It will not be easy at first to create these conditions in Nagpur: it will be impossible in Jubbulpore and Amraoti for many years to come. The number of candidates for Honours and postgraduate degrees is likely to be comparatively small when the University first comes into being. It will be best to concentrate them in one place and so form a community which in course of time will develop traditions and ideals of its own and create an influence that will make itself felt throughout the length and breadth of the Province.

Conditions of the successful organization of advanced courses of instruction.

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36. We recommend, therefore, that Honours and postgraduate studies shall be centralized in Nagpur. The University will be directly responsible for their organization, and for the provision of such buildings and equipment as may be necessary for their prosecution. But all the colleges will participate in the work of instruction by placing at the disposal of the University the services of certain of their teachers, specially selected for the purpose. These teachers, however, will not be wholly engaged in university work. They will also take their due share in the teaching provided by the colleges to which they belong, and will be able to bring their personal influence to bear on the social and intellectual life of those institutions. By this arrangement it will be possible to secure the advantages of direct university supervision and control of higher studies without depriving the constituent colleges of their proper influence in the intellectual life of the University.

Proposed organization.

37. The full course of instruction in arts and science prescribed by the University of Allahabad extends over six years. The first two are occupied in completing the general high school training, and lead to an Intermediate examination, which is usually regarded as the real test of fitness for admission to university studies. Two years of such studies lead to the degree of Bachelor, and a further period of two years to the degree of Master. The study of Law begins after graduation in Arts or Science, and the course for the degree of Bachelor extends over two years. The course for the degree of Licentiate in Teaching is a one-year course.

Courses of instruction.

The Intermediate
course.

38. Some of our members considered that the majority of students who have passed through the Intermediate course are not really qualified for admission to the degree courses of a university, and that the Intermediate course of the University should be extended over three years instead of two years as at present in the Allahabad University. While fully sympathizing with this proposal we think that it is open to certain grave objections which prevent us from entertaining it as a practicable proposition. An extra year would add materially to the expenses of university education, and would tend to handicap students in their subsequent career by postponing the age of graduation. On the other hand, we believe that the end which our colleagues have in view will be achieved very largely by the improvements in secondary education which are now being contemplated, and also by the methods of instruction in the Intermediate courses which we propose. On these grounds, we have decided to retain the present length of the Intermediate course.

Pass and Honours
courses for the de-
gree of Bachelor.

39. The course of instruction for the Pass degree of Bachelor will extend over two years, as at present. For the Honours degree the period of study will be three years. We feel that, in the case of the Honours courses, an extra year is an absolute necessity. As has been pointed out above, the Honours courses will be essentially different from the Pass courses, and must be designed for a different type of student from the Pass man. In recommending the institution of Honours courses, we have in view mainly the production of a class of men among whom we may expect to find persons who will be fitted by their acquirements and tastes to undertake research and extend the borders of knowledge. Such men require a thorough grounding in the subjects which they mean to pursue, and the experience of universities elsewhere shows that they should be given a longer time for preparation than is allowed to men who take the Pass courses.

Courses for the
degree of Master.

40. The formal education of the highest type of scholar should not, however, end with the attainment of the Honours degree. His curiosity will have been stimulated and his mental energies braced by his studies in the Honours school, but something more will be required before he is ready for an independent voyage into the realm of higher learning. He will need a direct training in methods of research. This will be provided by a course of one year leading to the degree of Master.

41. The degree of Master should not, however, be confined to those students who have taken advantage of the Honours courses. There will always be a considerable number of men who, for various reasons beyond their control, have been unable to take those courses, and yet possess the scholarly spirit in sufficient measure to make them desire the degree of Master. Such men, however, will not be as well qualified by their previous studies as Honours students, and it will be advisable for them to undertake a preliminary course of one year before entering upon the full course for the Master's degree.

The degree of
Doctor.

42. After taking the Master's degree, those students who show keenness and aptitude for advanced study and research should be encouraged to continue their studies under the direction of the professors of the University. A course of study followed by the production of a thesis involving original research should render such students fit to advance the progress of their country by their methods of study and their attainments, and incidentally qualify them for the Doctor's degree.

Law a superior
Faculty.

43. The only Law classes in the Province—those attached to the Morris College—are affiliated to the University of Allahabad, in which law is a superior Faculty, the degrees being granted after graduation, and the question arose whether this system should be continued in the new university. In several universities in England the degree of Bachelor of Law is a first degree, and open to undergraduates. This plan has the advantage of limiting the period of purely academic study, and of enabling the intending lawyer or barrister to obtain a practical training at a comparatively early date. It is doubtful, however, whether it would be suited to prevailing conditions in the Central Provinces. In the first

place, such a scheme of studies assumes that the students have received a sound general education before they enter upon the Law course. But this condition will not exist in the case of the undergraduates of the proposed university. And, secondly, it will be difficult to provide facilities for that practical training in chambers which must supplement the theoretical courses provided by the University, if the Law degree is made a first degree. It is the former consideration, however, which weighs most with us, and for this reason principally we recommend that Law should remain, as it has been in the past, a superior Faculty, and that it should be necessary to take a degree in Arts or Science before proceeding to a degree in Law.

44. But, while retaining so far the present system of Law studies, we are sensible that it requires considerable improvement in various directions. In particular, we consider that the University should lay more stress on the scientific aspect of legal education, and, without neglecting dogmatic current law and its application to concrete cases, should aim at making instruction in the rational principles and historical development of law a more prominent feature of its courses. "In this way only will it be possible to equip men who will be able to develop the law now current, that is to say, to create new law, an inevitable task, since the never ceasing movements of society are constantly bringing about new relations, which, in turn, call for new legal formulas." This conception of legal education involves a considerable enlargement of the present courses, and, as a corollary, an extension of the period of study. Accordingly, though fully conscious that this is only a preliminary step towards the attainment of the high ideal that is set before us, we recommend that the course for the degree of Bachelor should be a course of three, instead of two, years, as at present in the Allahabad University.

Extension of the course of study for the degree of Bachelor of law.

45. The course for the degree of Licentiate of Teaching will be, as at present, a one-year course.

46. In addition to the ordinary courses of instruction which we have mentioned, the University, should, as far as possible, provide facilities for the artistic training of its students—a function which has hitherto been entirely ignored by Indian universities. We need hardly say that we do not aim at the inclusion of courses of instruction in the Fine Arts in the regular curriculum of the University. But we are strongly of opinion that a university, which seeks to give a general culture, should at least provide its students with opportunities for the development of such artistic tastes as they may possess. A small collection of casts and paintings, representative of eastern and western Art, would suffice in the first instance, and additions might be made from year to year. But, however modest its beginnings, a University Museum of Art should be established under the control of the University itself.

University Art Museum.

47. The usual method of instruction in colleges in India until recent years was the lecture, and a description of this method and its effects, taken from the Quinquennial Review of Education for the period 1902—07, is worth transcribing. "The arrangement most commonly prevailing still at the Indian universities is for the student to attend every day four or five lectures, and to spend most of his leisure time in transcribing and conning the notes which he had made during lecture hours. This system is not calculated to develop the student's powers of originality, using the term in its humblest sense. It develops his receptivity and his powers of memory, but does not necessarily exercise him in thinking for himself, puzzling out difficulties, using individual judgment in the arrangement of his material, and exploring points left unexplained in his lecture. A school of opinion, however, is now forming which condemns the excessive use of lecturing, and there are some beginnings of practical attempts to use other methods." We desire to express our entire agreement with this condemnation of the abuse of the lecture.

Methods of instruction.

48. In the scheme which we propose, the number of lectures will be considerably curtailed, and the tutorial method will be the chief mechanism of instruction throughout all the stages of study. By the tutorial method we mean the supplementing of instruction through lectures, delivered to large and indefinite

The tutorial method.

numbers, by teaching of a personal and catechetical nature, given to classes of carefully restricted proportions. That instruction of this kind is necessary is now generally accepted. The only point in dispute is what should be the size of the tutorial class. We strongly recommend that no class should exceed twenty, in the case of undergraduate, and twenty-five in the case of graduate, students. If, for financial reasons, it should be found impossible to apply this restriction to classes in all subjects, we would urge that in one subject, at any rate, the classes should not contain more than twenty. No student will be able to profit from the courses of instruction, who does not possess an adequate command of English, the language in which they are given. In English, therefore, the training should be particularly thorough. This thoroughness can be secured only by a strict limitation in the size of the tutorial class.

Limitation of number of hours of instruction assigned to teachers.

49. It will further conduce to efficiency of teaching, if some restriction is placed upon the amount of instructional work which may be assigned to the teachers. We consider that no teacher should be expected to devote more than 12 hours to lectures, or give more than 20 hours' tutorial instruction, in a week. Without this limitation, the teachers will not be able to meet the demands which a residential system such as we propose is bound to make upon their time and energies, and it will be difficult for them to obtain opportunities for that independent reading and investigation which are so essential to originality and freshness of teaching.

Number of teachers.

50. Our proposals with regard to methods of instruction will involve the employment of a considerable body of teachers. But, as will appear from a study of the proportion of teachers to students, whether in Nagpur itself or in the external colleges, the staff that we recommend is by no means excessive. As regards the teaching staff in Nagpur, we have endeavoured to secure the utmost possible economy by recommending a system of inter-collegiate lectures and tutorial classes in Pass subjects, and the concentration of advanced courses under the control of the University itself.

Formation of character.

51. No scheme of university education can be called complete which confines itself to making provision merely for the intellectual needs of the community. A university should not be contented with a one-sided development in its students. It should aim at the production of character (using the word in the widest sense), no less than at the development of intellectual power. This is a truth which was not recognized when the universities of India were founded, but experience has convinced them of its paramount importance, and in no direction have their activities been more clearly marked in recent years than in the attempts which they have made to create for their students conditions of life conducive to the formation of character.

The residential system.

52. Among these conditions must be reckoned, first and foremost, the provision of facilities for residence in colleges. The colleges should be regarded as centres of moral and social, as well as intellectual, influence. They should be institutions in which not only the intellect is trained, but character is fashioned, traditions are formed, friendships are made, and the horizon of life is widened and extended by a complexity of interests. But the full advantages of the collegiate life are obtainable only by those students who live and spend their days in college: they are denied to those who reside outside. So impressed are we with the value of collegiate residence that we have devoted a considerable amount of time and thought to the consideration of a scheme which will make it possible for the very poorest students to receive its benefits. Indeed, we recommend as a vital feature of our scheme that all undergraduates should reside in college, and that exception should be made only in the case of those who live in the town with guardians approved by special regulations of the University.

Main features of the residential system.

53. The main features of the residential system which we propose may be briefly described. In the first place, the colleges will be strictly limited in size. In Nagpur, where they will be entirely residential, they will not accommodate more than 400 students, while in the external colleges the maximum number of students in residence will be 300, the number of non-resident students being

limited to 100. Limitation of numbers is an essential condition of the collegiate life which we contemplate, and any increased demand for residence should be met not by the expansion of the original colleges but by the addition of new ones. In the second place, the proper supervision of the students and the development of close and friendly relations between them and the members of the teaching staff will be secured by providing the staff with residences near, and, in some cases, in, the colleges, and by assigning to a certain number of them duties of a disciplinary, or, as we prefer to call it, a preceptorial nature. Finally, we propose to create special facilities for enabling poor students to enter into residence by a liberal award of bursaries, and by establishing messes suited to their means.

54. For non-resident students also the conditions of a corporate life should, as far as possible, be provided, and, with this object, we recommend that such students in Nagpur, where they are likely to be fairly numerous, should be members of a Non-Collegiate institution and placed under the charge of a university official of high standing. Considerations of expense forbid the establishment of institutions of this kind in the other centres, where the number of students not in residence will be comparatively small. But the University should see to it that the life of such students outside the class room is not neglected, and regulations have been devised to secure their effective supervision by the college authorities.

Non-resident students.

55. A real living collegiate organization will make it possible to introduce a system of medical inspection and physical training, of which all students alike will be able to enjoy the benefit. The modern university should aim at producing an all-round development, and for this purpose it is of vital importance that the body, as well as the mind, should receive its due share of training. We recommend, therefore, that the University should contain a department of Physical Education whose functions should include the medical examination of all students on admission to the University, and the provision of a course of practical and theoretical instruction in physical development. Facilities for games should be also provided, and every student should be required to take physical exercise of some sort for certain periods every week throughout his career as an undergraduate.

Physical education.

56. Further, we regard it as an essential part of our scheme that the various colleges should be brought into close touch with the University, of which they form the component parts. The college should be regarded as the unit of the university system, and it will naturally attract the greater part of every student's energies. But, while desiring to strengthen in every way the collegiate spirit, we aim also at promoting a university *esprit de corps*. The students of all the colleges should be made to feel that they are members of one great institution. As regards the Nagpur colleges, the attainment of this end will be promoted by the formation of a central society, of which all the undergraduates and graduates should have the privilege of membership, and by the selection of college teachers for university work. The external colleges can never attain the same close relationship with the University as the colleges in Nagpur. But no means should be neglected to bring them as far as possible within the sphere of common influence. The participation of their members in periodical athletic sports of the University, and their inclusion in university teams selected to compete against other universities, will be bonds of union. The institution of an annual University Week will be another means of emphasizing their connection with the University.

University *esprit de corps*.

57. In any scheme of university construction, the question of the qualifications, which should be demanded from students seeking matriculation, must take a prominent place, and this is a problem which has engaged our most serious attention. We have to remember that what is required in a candidate for admission to the University is not so much the acquirement of a certain definite standard in particular subjects of study as a capacity to receive and profit by a university education. Experience has proved that an external examination conducted by a university affords no guarantee of the general training which is an indispensable condition of the undergraduate's work. At its best, it gives

Defects of external Matriculation examinations.

but an uncertain indication of the candidates' real mental powers, and, at its worst, it has been found to condemn the schools to stereotyped courses and methods of instruction which tend rather to retard than to promote the intellectual development of their pupils. These effects have been as conspicuous in India as in other countries where external examinations have dominated the work of the secondary schools.

A school leaving certificate the proper test of admission to the University.

58. Bearing these considerations in mind, we have come to the conclusion that the curricula of the secondary schools should not be determined, as they have been in the past, primarily by the demands of the matriculation examination, but should be developed less artificially with reference to the general needs and circumstances of the Province. We recommend, accordingly, that admission to the University should not depend on the results of a single examination, but (mainly, at any rate) on the record of a candidate's school career which should be embodied in a school leaving certificate. It does not lie within our terms of reference to make specific recommendations with regard to the nature of the certificate, and the organization of the system under which it will be awarded. The paramount authority, in regulating the courses and awarding the certificate, should be the Education Department, but the University should have its proper share of the responsibility, and we recommend that, if any board is constituted to regulate the conditions of award of the leaving certificate, the University should be adequately represented on it. Further it should be allowed to maintain its standard of attainments in special subjects by instituting, if it considers necessary, a supplementary matriculation examination.

Special cases.

59. A candidate for admission to the University will generally have attended a high school in the Province and obtained a school leaving certificate. But we have to provide for the cases of students who have not been through the complete high school course, or who, having obtained the leaving certificate, have allowed some time to elapse before seeking entrance to the University. Such candidates should not be debarred from higher education, provided they satisfy such tests as the University may prescribe. The nature of such tests may well be left to the University, when it is constituted, to determine.

University education for women.

60. Though there are not wanting signs that the demand for higher education for women is growing in these Provinces, it may be taken for certain that the number of lady students in the University will be inappreciable for some years to come. We have, therefore, made no special provision in our scheme for the needs of such students. We look forward to a time when the demand for university education will be sufficiently advanced to justify the establishment of a college in which women will enjoy all the advantages attached to the residential system. Meanwhile, they should be members of the Non-Collegiate institution. The modifications of the university regulations in the interests of lady students is a matter that may be left to the discretion of the University.

CHAPTER IV.

COMPOSITION OF THE UNIVERSITY.

Recommendations.

General Character.

61. The University should include—

- (a) A University and colleges situated in the immediate neighbourhood of Nagpur.
- (b) Colleges situated in other places.

Colleges.

62. Provision should be made for the following colleges :—

- (a) In Nagpur, the Hislop College, the Morris College and, as soon as the other two colleges are filled, (see paragraph 68) the Craddock College.

(b) In Jubbulpore, the Robertson and Training Colleges.

(c) In Amraoti, the King Edward College.

All the above colleges should be incorporated with the University, (see paragraphs 22 and 167 (iii)), except the Hislop and Training Colleges, which will be affiliated institutions. The Training College will be dealt with separately in Chapter VI.

63. The University should contain Faculties in Arts, Science and Law, and a department for the training of teachers subordinate to the Faculty of Arts. It should confer the degrees of Bachelor, Master and Doctor in each of the Faculties of Arts, Science and Law, and the degree of Licentiate of teaching. Faculties.

64. The University should provide courses of instruction (a) for the Honours and higher degrees in Arts, (b) for all examinations and degrees in Science and Law. University courses of instruction.

65. The colleges should provide instruction as follows :—

College courses of instruction.

(a) The Nagpur Colleges in all Arts subjects up to the B. A. pass standard.

(b) The Robertson College in all Arts subjects up to the B. A. pass standard and in Physics and Chemistry up to the B. Sc. pass standard.

(c) The King Edward College in all Arts subjects up to the B. A. pass standard and in Physics and Chemistry up to the Intermediate standard.

(d) The Training College in the course for the degree of Licentiate of teaching.

66. A college in Nagpur should not contain more than 300 undergraduate and 100 graduate students. Size of Nagpur colleges.

67. An external college should not contain more than 300 resident and 100 non-resident students. Size of external colleges.

Notes.

68. The colleges and institutions for which we make provision in our scheme will contain the following numbers of students :— Number of students.

		Total number of students.	Number in residence.
In Nagpur—			
Hislop College	...	350	350
Morris College	...	350	350
Craddock College	...	350	350
Non-Collegiate Institution	...	175	...
	Total	1,225	1,050
In Jubbulpore—			
Robertson College	...	400	300
Training College	...	30	30
In Amraoti—			
King Edward College	...	300	200
	Total	730	530
	GRAND TOTAL	1,955	1,580

From the above figures it will be seen that none of the colleges, with the exception of the Robertson College, will at first attain its full complement of students. But we consider that each college should be built to accommodate

400 in view of the rapid increase in numbers which is certain to take place : and we have made provision for this in our estimate of buildings.

69. A reference to paragraph 12 will show that the existing colleges of the Province contain about 1,100 students, exclusive of undergraduates in the Training College. We therefore provide for an increase of approximately 850 students. This may seem, at first sight, an exaggerated estimate, but it is justified by the statistics of education in recent years. In the quinquennium ending in 1912, the number of pupils in the high school classes increased by over 50 per cent, while the rolls of the colleges showed an increase of more than 200 per cent in the number of students. Since 1912, the annual rate of increase has been slightly accelerated, and there is no reason to suppose that it will suffer any diminution in the years to come. It may be expected with some degree of confidence, therefore, that within a few years of the opening of the University, the number of students will have reached the figure which we have ventured to give.

Distribution
among Faculties.

70. We estimate that the distribution of students in Nagpur among the various Faculties will be approximately as follows :—

Arts	...	...	650
Science	...	...	350
Law	...	...	225

We estimate that, of the students of the Robertson and King Edward Colleges, 580 will study Arts and 120 Science.

CHAPTER V.

COURSES AND METHODS OF INSTRUCTION, EXAMINATIONS.

Recommendations.

General.

71. The following courses of instruction should be provided :—

Undergraduate courses of instruction—

- (a) Intermediate courses in Arts and Science extending over two years.
- (b) Courses in Arts and Science for the Pass degree of Bachelor extending over two years.
- (c) Courses in Arts and Science for the Honours degree of Bachelor extending over three years.

Graduate courses of instruction—

- (a) Courses in Arts and Science for the degree of Master extending over one year in the case of graduates who have previously taken an Honours degree, and over two years in the case of graduates who have previously taken a Pass degree.
- (b) Courses in Law for the degree of Bachelor extending over three years.
- (c) A course in the principles and practice of teaching extending over one year.

72. No one should ordinarily be admitted to the Intermediate courses, unless he possesses a school leaving certificate, and satisfies such other tests as the University may prescribe. The minimum age for matriculation should be sixteen.

73. No student should be admitted to the courses for the degree of Bachelor in Arts and Science unless he has completed the Intermediate course of the University or an equivalent course in another university and passed an Intermediate examination in Arts or Science.

74. No student should be admitted to the courses for the degree of Master in Arts and Science unless he has taken the degree of Bachelor of the University or an equivalent degree of another university.

75. No student should be admitted to the course for the degree of Bachelor of law or for the degree of Licentiate of teaching unless he has taken the degree of Bachelor of the University in Arts or Science, or an equivalent degree in another university.

76. The Intermediate course in Arts should include five subjects as follows :-- Arts courses—Intermediate.

English

A Vernacular.

Any three of the following :—

A classical or modern European language.

History.

Logic.

Elementary Economics.

Mathematics.

Biology or Physics or Chemistry.

The Vernacular should be one of the following :—

Hindi.

Marathi.

Urdu.

The classical language should be one of the following :—

Sanskrit.
Persian.

Arabic.
Latin.

The modern European language should be either French or German.

77. The instruction in these subjects should be mainly of a personal and catechetical nature, given to classes of not more than twenty students. Lectures, which might be delivered to as many as 150 students, should also be provided.

78. The course for the B. A. Pass degree should comprise the following subjects :—

B. A. pass.

English.

Any two of the following :—

A classical or modern European language.

History.

Philosophy.

Economics.

Mathematics.

The classical and modern European languages, from which selection may be made, should be those mentioned in paragraph 76.

79. Instruction should be given by means of lectures supplemented by tutorial instruction, in classes of not more than twenty students, as in the Intermediate course.

B. A. Honours.

80. The course for the B. A. Honours degree should comprise one principal and one subsidiary subject, selected from the following list :—

English.
A classical or modern European language.
History.
Philosophy.
Economics.
Mathematics.

The classical and modern European languages, from which selection may be made, should be those mentioned in paragraph 76.

81. A candidate offering English as a principal subject should take one of the other subjects as a subsidiary.

82. A candidate offering any other subject than English as a principal subject should take English as a subsidiary.

83. Instruction should be given by means of lectures supplemented by tutorial instruction which should be given to students in groups of two.

M. A.

84. The course for the M. A. degree should consist of a single subject selected from the list prescribed for the B. A. honours degree.

85. The methods and hours of instruction should be as recommended in connection with the Honours course.

**Science courses —
Intermediate.**

86. The Intermediate course in Science should include five subjects as follows :—

English.
A Vernacular.
Physics.
Chemistry.
Mathematics or Biology.

87. The methods of instruction in English, the vernacular and mathematics should be the same as for the Arts students. The instruction in physics, chemistry and biology should be given by means of lectures, tutorial work and laboratory classes. A tutorial class should contain not more than 20 students, and a laboratory class not more than 15.

B. Sc. Pass.

88. The course for the B. Sc. Pass degree should comprise one of the following groups of subjects :—

- (a) Physics, Chemistry, Mathematics ;
- (b) Chemistry, Botany, Zoology ;

and a subsidiary course in English.

89. The methods of instruction should be the same as in the Intermediate course.

B. Sc. Honours.

90. Candidates for the B. Sc. Honours degree should offer one principal and one or two subsidiary subjects, according to the following scheme :—

Principal subject.	Subsidiary subject.
Physics	... { Mathematics. Physical and General Chemistry.
Chemistry	... { Physics. Mathematics.
Botany	... Zoology.
Zoology	... Botany.
Mathematics	... Physics.

91. Instruction should be given by means of lectures, laboratory work and tutorial instruction. The laboratory classes should not contain more than 15 students, and the tutorial instruction should be given to students in groups of two.

92. The course for the M. Sc. degree should be a continuation of the Honours course, but should involve considerable specialization. M. Sc.

93. The methods of instruction should be the same as those recommended in connection with the Honours courses.

94. The degree of Doctor of Letters or Doctor of Science should be conferred on Masters of Arts or Science who have distinguished themselves by special research and learning, and candidates for the degree should present a thesis in some branch of study comprised within the Faculty of Arts or Science. D. Litt. and D. Sc.

95. A public examination should be held at the end of each course of instruction, and no student should be admitted to an examination unless he has attended the full course of instruction. Examinations.
Arts and Science.

96. The examinations held at the end of the Intermediate course in Arts and at the end of the course for the B. A. (Pass) degree should be conducted entirely by means of papers. Intermediate in
Arts and B. A.
Pass.

97. The examinations held at the end of the Intermediate course in Science and at the end of the course for the B. Sc. pass degree should be conducted partly by means of papers and partly by tests in practical work. Due credit should also be given to students for practical work done during term and properly recorded in note books. Intermediate in
Science and B. Sc.
Pass.

98. Successful candidates in the above examinations in Arts and Science should not be graded, but those who show high proficiency in any subject of examination should be declared to have gained distinction in that subject.

99. There should not be a written examination for candidates for the B. A. and B. Sc. Honours and M. A. and M. Sc. degrees. But the examination should be entirely oral, based partly on a thesis previously submitted and partly on the general course of study offered by the candidates. Candidates for the B. Sc. Honours and M. Sc. degrees should, in addition, be required to undergo a practical examination. The oral and practical examinations should be conducted by the teachers of the University assisted by external examiners. B. A. and B. Sc.
(Honours), M. A.
and M. Sc.

100. Candidates for the M. A. and M. Sc. degrees who have not previously taken an Honours course and who, therefore, are required to attend a two years' course for the degree should be examined by means of papers (and, in the case of candidates for M. Sc. degree, by laboratory tests also) at the end of the first year of study, and their admission to the M. A. or M. Sc. degree course proper should be made to depend on the results of this qualifying examination.

101. Successful candidates in the Honours, and the M. A. and M. Sc. examinations should be graded in three classes. A candidate who fails to obtain Honours in the examination for the degree of Bachelor should be given a Pass degree, provided he satisfies the examiners.

102. Candidates for the degree of Doctor may be required to present themselves for examination (oral or otherwise) on the subject of the thesis which they have previously submitted. D. Litt. and D. Sc.

103. A student should not be admitted to a course of instruction unless he is properly qualified to profit by it, and the fitness of a student for entering upon a course of instruction should be carefully investigated. Qualifications for
admission to courses
of instruction in
arts and science.

104. Thus, as a general rule, a student should not be permitted to take a course of instruction for the B. A. or B. Sc. Pass degree unless he has previously taken an allied course in the Intermediate stage of study, *e. g.*, no student should be permitted to take History and Philosophy for the B. A. degree, unless he has completed the Intermediate course of instruction in History and Logic.

105. Similarly, a student should not ordinarily be admitted to a course of instruction for an Honours degree unless he has revealed his fitness for such a course by gaining a distinction in the Intermediate examination in the subject which he desires to offer as his principal subject (see paragraph 98). *Mutatis mutandis*, this rule should also apply to students, who, having taken the Pass degree of Bachelor, desire to proceed to a course for the degree of Master.

Courses of study
in Law, LL.B.

106. The course of study for the degree of Bachelor of Law should include the following subjects :—

Roman Law.
Jurisprudence and the Elements of Law.
Principles of Evidence.
Constitutional Law.
Contracts and Torts.
Transfer of Property and Easements.
Law of Intestate and Testamentary Succession.
Hindu and Muhammadan Law.
Law of Persons.
Equity, including Specific Relief and Trusts.
Local Land Law.
Law of Crimes.
Procedure and Limitation.

107. The period of study should be three years.

108. Instruction should be given by means of lectures and tutorial class work. Lectures should not be delivered to more than one hundred and fifty students, and a tutorial class should not contain more than twenty-five.

109. An examination should be held at the end of each year of the course, and the degree should be awarded on the combined results of the three examinations. The examinations should be conducted partly by means of papers and partly *viva voce*. Successful candidates should be arranged in three classes, according to merit.

LL.M.

110. The course of study for the degree of Master of Law should include—

- (i) Advanced Jurisprudence and the Principles of Legislation.
- (ii) Hindu or Muhammadan Law.
- (iii) Equity, including Trusts and Specific Performance.
- (iv) Contracts and Torts.
- (v) Any two of the following :—
 - (a) Transfer of Immovable Property, Prescription and Easements.
 - (b) Principles and History of the Law of Real and Personal Property.
 - (c) Wills and Intestate Succession.
 - (d) Constitutional Law and History (English and Indian).
 - (e) International Law (Public and Private).
 - (f) Customary and Statute Law relating to Land Tenures in British India.
 - (g) Principles and History of Roman Law.
 - (h) Agencies, Partnerships, Companies and Mercantile Law.

Any Bachelor of Laws of the University of two years' standing should be admitted to the examination for the degree of Master of Laws.

111. The examination should be partly written and partly *viva voce*.

The degree of
Doctor of Laws.

112. The degree of Doctor of Laws should be conferred on any Master of Law provided that he has submitted a thesis on some branch of law, or of the history or philosophy of laws which is approved by the Faculty.

Notes.

113. In recommending that the minimum age for matriculation should be sixteen, we have followed the regulation of the University of Allahabad to which the colleges of the Central Provinces are at present affiliated. See paragraph 72-

114. The subjects in which we recommend that the University should provide courses of instruction are the following :—

English.	Urdu.
Sanskrit.	History.
Persian.	Economics.
Arabic.	Philosophy.
Latin.	Logic.
French.	Mathematics.
German.	Physics.
Hindi.	Chemistry.
Marathi.	Botany.

Zoology.

But we make no special provision in our estimate of teaching staff for Latin, French or German, as we consider that there will be little or no demand for instruction in those subjects when the University first comes into existence. When the demand comes, the University should be prepared to meet it.

115. It will be observed that we recommend that the study of a vernacular should be compulsory in the Intermediate stage, but omit it entirely in the degree courses. The question of the vernaculars is one of considerable difficulty, and we have been at some pains to arrive at a right decision as to the place which they should occupy in our scheme of university studies. On the whole, it seems to us that, while they should certainly form a part of the general training which the Intermediate course is meant to supply, there are not sufficient grounds at present for recommending their inclusion among the higher courses of instruction, and, in the absence of any definitely formulated public opinion in these Provinces, we have thought it wisest to follow in this matter the practice of the Allahabad University, which so far has met with general acceptance. We have, accordingly, made no provision in our financial estimate for instruction in the vernaculars beyond the Intermediate stage. We feel, however, that the whole question may suitably be left to the Senate of the University for a more comprehensive consideration than we have been able to give to it, and our proposals regarding teaching staff should be regarded as without prejudice to such further consideration. We have restricted the list of vernaculars to Hindi, Marathi and Urdu, as these are the only languages which are spoken by any considerable number of people in these Provinces. See paragraphs 76 and 78.

116. We have included Elementary Economics, as an alternative subject, in the Intermediate course in Arts, and have made provision for its study in our estimate of teaching staff. This is a departure from existing systems of university study in India. The course which we have suggested will comprise the elements of economic theory with special reference to Indian conditions and the economic geography of India. We consider that a course of this nature will have considerable educational value in itself and will be a good preparation for further study in the subject. It is essential, in our opinion, that the student should acquaint himself with the economic facts which surround him before he plunges into theories based on western experience. Such theories are generally meaningless and sometimes misleading without a preliminary knowledge of Indian economic conditions. It is this preliminary training which the Intermediate course that we propose is meant to supply, and we trust that, once the student has grasped the main facts of economic life in India, subsequent study will lead him to closer investigation which may ultimately result in additions to our knowledge, and in throwing light on the economic problems which constantly press for solution. In no branch of study is a school of research more needed than in Indian economics. We hope to see such a school arise in the Central Provinces University. See paragraph 76

117. The courses suggested for the Honours degree in Arts are designed to ensure a certain amount of specialization without unduly narrowing the range See paragraphs 80-82.

of study. The student will find in his principal subject ample scope for specialized study. A subsidiary course in some other subject will extend and diversify his knowledge, and prevent excessive specialization. A student who offers English as his principal subject will be able at the same time to gain some knowledge of History or Philosophy or Economics, etc., and similarly, a candidate for honours in History or Economics, etc., will be given the opportunity of acquainting himself with the masterpieces of English literature. As far as possible, the subsidiary course of study will be really subsidiary; it will be a means of illuminating the principal subject, while at the same time extending the general culture of the students. For example, for a student offering History as his principal subject, the subsidiary course in English will include some of the masterpieces of English historical literature. It has been suggested in various quarters that a candidate for Honours, who offers a subject other than English as his principal subject, should be required to take the Pass course in English as a subsidiary. We are unable to fall in with this suggestion. For, in the first place, the Pass course in English is a fairly lengthy one, and will take up much more time than the Honours student can afford to spare, if he is to devote proper attention to his principal subject of study. And, secondly, the Honours man will be a student of superior ability and attainments, and will not require the detailed training in English which is found necessary in the case of men who seek the Pass degree.

See paragraph 84.

118. The course for the M. A. degree is meant to provide a direct training in methods of advanced study and research, and for this reason should be highly specialized and confined to a single subject. Candidates for the degree who have taken the B. A. pass degree will take a preliminary course of one year consisting of certain portions of the Honours course. It may be noted that the M. A. course will thus be open to ex-students of the external colleges.

119. The subjects of the Honours and M. A. courses will be taught in the seminars of the University. Each subject of study will have its own seminar, and the students will work under the direct supervision of the University Professors. Each seminar will be provided with a reference library and a private room for the Professor, and will be generally equipped with all the material aids necessary for imparting life and reality to the subject of study with which it deals. In certain subjects, such as Economics and Ancient History, further facilities of study will be afforded by the Nagpur Museum which, according to our scheme, should be enlarged and reorganized so as to promote advanced study and research without losing the special characteristics which have made it so deservedly popular.

120. Although, as we have already pointed out in paragraph 30, there will not be for some years to come sufficient demand in this Province for university courses in Medicine to justify the establishment of a Faculty in that branch of learning, there will always be a limited number of students desiring to take a degree in Medicine. For such students the University should provide the preliminary training required for admission to the medical colleges of other Provinces. This we have secured by including in the Intermediate stage of study a course in Biology of the same standard as that prescribed by the medical faculties of other Indian universities for the Preliminary Scientific examinations.

See paragraph 99.

121. In the new University the conditions of Honours and postgraduate work will be peculiarly favourable for the abolition of written examinations. The teachers will be men of high character and scholarship, and the methods of instruction which we recommend will give them unique opportunities of becoming acquainted with the general capacities of their pupils and of judging their fitness for degrees. We consider that, under these circumstances, a written examination will be superfluous, and the award of Honours and postgraduate degrees should depend primarily on the recommendations of the teachers themselves, supported by records of the students' work. At the same time, we recognise that public opinion is likely to demand some specific test and a guarantee that it shall be above suspicion. We hope that this demand will be satisfied by our proposal that candidates shall submit a thesis on a subject relating to their course of study, and also undergo an oral examination in which the teachers of the University shall be assisted by external examiners. Though fully aware of the potential evils of all written examinations, we feel that further steps towards their abolition would be impracticable at present.

122. The main features of our proposals for instruction in Law are—

See paragraphs
106—109.

- (i) The stress laid upon the necessity of a more scientific study of Law ;
- (ii) The institution of small tutorial classes for the purpose of supplementing the instruction given by lectures ;
- (iii) The consequent necessity of holding the classes during the day, and not, as hitherto, in the early morning or late evening ;
- (iv) The appointment of teachers who will devote the greater part of their time to the work of instruction.

We have already dealt with the importance of making Law a more scientific study (see paragraph 44).

We are of opinion that lectures alone do not provide a sufficient training in law, and we provide for supplementary instruction in tutorial classes containing not more than 25 students. The tutorial instruction will be of a personal and catechetical nature, as in the Arts and Science courses, and will include the setting of hypothetical cases, guidance in the reading of the students, advice regarding the mode of referring to cases and looking up enactments and authorities bearing on any question. Such instruction will possess a two-fold value. It will ensure a thorough understanding of the formal lectures, and it will provide, in some measure, that practical training which is so indispensable to the intending lawyer, but which is so difficult to obtain in existing circumstances in India.

At present the study of Law is a perfunctory operation. "The majority of the students have no books : they do not intend to listen to the lectures : very many of them are employed as teachers in schools or clerks in public offices, and their only anxiety is to get credit for attendance at a certain number of lectures as required by the university regulations : and it is by no means an unusual incident for a student to get himself marked present by a proxy." (Quotation from the report of the Calcutta University in Progress of Education in India 1907—12, Volume I, page 147). It is obvious that under these circumstances a real study of Law is impossible. "If a student is to get more from the instruction of the lecture or the class room than notes in preparation for an examination, a considerable amount of leisure is essential for independent reading, and for the reflective thought necessary to the slow process of assimilation." For this reason we recommend that the instruction be given in the day and not, as hitherto, in the early morning or late afternoon.

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It follows from this that the teachers must devote the greater part of their time to the work of instruction.

CHAPTER VI.

THE TRAINING COLLEGE.

The Sub-Committee which we appointed to advise on the subject of the Training College made the following proposals with which we concur :—

123. "The present Training College at Jubbulpore has two departments, namely, a secondary department to which candidates who have passed the matriculation examination are admitted, and a collegiate department which is open only to graduates. On grounds of economy and efficiency of administration, it is necessary that these two departments should remain under a single control, but the course of the secondary department is not sufficiently advanced either in general or in technical studies to be recognised as a University course. We therefore recommend that only the collegiate department of the Training College should be affiliated to the University, while the secondary department should remain wholly under the Department of Public Instruction.

124. "It would be undesirable to divide the staff, and it would be impossible accurately to apportion the expenses of the Training College between the collegiate and secondary departments. We, therefore, recommend that, for financial purposes, the Training College should remain under the Department of Public Instruction, its budget should not be incorporated with that of the University, and its staff should remain in the cadre of the Education Department.

125. "The collegiate department of the Training College should be subject to the control of the University as regards courses of study, examinations and the conduct and residence of students; and the University should have authority to satisfy itself of the general efficiency of the department by means of inspection. The University should also have power to inspect the Practising School attached to the college in order to assure itself that the school is a model to the college students and provides adequate scope for their practical work. But the school should not be under the control of the University.

126. "The course for the L. T. degree should be a one year course, and should include the following subjects:—

"(i) General principles of teaching and their application, under the following heads:—Physiology, Psychology and Logic.

"(ii) Special methods in the teaching of the following subjects:—

"(a) English.

"(b) Mathematics.

"(c) Physical science.

"(d) Natural science.

"(e) History.

"(f) Geography.

"(g) Classical languages.

"(h) Primary School subjects.



"Each student should take two of the above subjects.

"(iii) Practical training.

127. "We are of opinion that, for efficient tuition in this course, there will be required a staff consisting of the Principal who should be a member of the Indian Educational service, and four assistants in the Provincial Educational service. The Principal and one assistant would be responsible for the general supervision of the students, and for their instruction in general principles and one or two of the special subjects. Each of the other assistants would give instruction in two special subjects and be responsible for practical training in those subjects.

128. "This staff should suffice for a class of 30 students, a number which will meet the demands of the Education Department for many years to come.

129. "In addition we recommend the appointment of a member of the Indian Education service as headmaster of the Practising School."

NOTE.—In accordance with the recommendation made in paragraph 124, we have omitted all reference to the receipts and expenditure of the Training College from our financial estimate.

CHAPTER VII.

TEACHING STAFF.—ARTS, SCIENCE AND LAW.

Recommendations.

130. The teachers of the University and the incorporated colleges, with the exception of teachers of Law and Readers (see paragraphs 144 and 145) should be members of the Educational Service of the Government whose services are placed at the disposal of the University. The teachers in the affiliated colleges should be recruited by the authorities of the colleges themselves.

131. The teachers of the University and the incorporated colleges should be distributed among the following grades:—

- (i) Indian Educational service.
- (ii) Senior Collegiate service.
- (iii) Junior Collegiate service.

132. The salaries of each of these grades should be determined by Government.

133. In affiliated colleges, the rates of salary of each grade of teacher should be fixed with reference to those adopted for similar classes of teachers in incorporated colleges.

134. Teachers should be classified as follows for academic purposes:—

Academic classification.

- (i) University Professors.
- (ii) College Professors.
- (iii) Lecturers.
- (iv) Tutors and Demonstrators.

A University Professor will be the chief teacher in each Honours and post-graduate subject of instruction. A College Professor will be the chief teacher of a subject in which instruction is given in a college up to the Pass degree standard. Lecturers will be all other teachers above the Junior Collegiate service or the corresponding grade in an affiliated college. Members of the Junior Collegiate Service or of the corresponding grade in an affiliated college will be called Tutors if engaged in Arts work or Demonstrators if engaged in Science work.

135. Persons who at present hold the title of Professor should continue to be so called, irrespective of the nature of their work or grade of service.

136. Teachers of Arts subjects should not be expected to deliver more than twelve lectures per week or give more than twenty hours' tutorial instruction. In Science subjects not more than sixteen hours' instruction should be assigned to each teacher. For teachers of Law the maximum amount of lecture or class work should be fourteen hours per week.

Hours of instruction assigned to teachers.

137. The duties of Principals of colleges should be mainly administrative, but they may be expected to take some part in the work of instruction.

138. The following teaching staff for Arts and Science subjects will be required by the University and the colleges in Nagpur:—

Staff of the University and Nagpur Colleges (Arts and Science).

Subject.	No. of teachers.
English	15
Sanskrit	7
Persian	3
Arabic	2
History	8
Philosophy and Logic	6
Economics	6
Mathematics	8
Vernaculars	1
Physics	14
Chemistry	14
Botany and Zoology	14
Total	98

To this number must be added the Principals of the three colleges, bringing the total number of persons engaged in teaching up to 101.

Distribution among grades.

139. These teachers (exclusive of Principals) should be distributed among the University services and the corresponding grades in the affiliated college as follows :—

Teachers of			Indian Educational Service or corresponding grade in the Hislop College.	Senior Collegiate Service or corresponding grade in the Hislop College.	Junior Collegiate Service or corresponding grade in the Hislop College.	Total.
English	...	...	5	6	4	15
Sanskrit	...	...	2	3	2	7
Persian	...	...	...	2	1	3
Arabic	...	...	1	1		2
History	...	...	3	3	2	8
Philosophy	...	}	3	2	1	6
Logic	...					
Economics	...	...	3	2	1	6
Mathematics	...	...	3	3	2	8
Vernaculars	...	...	...	...	1	1
Physics	...	...	2	4	8	14
Chemistry	...	...	2	4	8	14
Botany	...	}	2	4	8	14
Zoology	...					
Total			26	34	38	98

Two Principals will be in the Indian Educational Service, and one will be a missionary.

Distribution among the colleges and the University.

140. The total staff should be divided among the various colleges and the University, for the purpose of the financial estimate, as follows :—

Class of teachers.			Hislop College.	Morris College.	Craddock College.	University.	Total.
English	{ I. E. S., &c.	...	2	2	1	...	5
	{ S. C. S., &c.	...	2	2	2	...	6
	{ J. C. S., &c.	...	1	1	2	...	4
Total			5	5	5	...	15
Sanskrit	{ I. E. S., &c.	...	...	1	1	...	2
	{ S. C. S., &c.	...	1	1	1	...	3
	{ J. C. S., &c.	...	1	...	1	...	2
Total			2	2	3	...	7
Persian	{ S. C. S., &c.	...	...	1	1	...	2
	{ J. C. S., &c.	...	1	...	...	...	1
Total			1	1	1	...	3

Class of teachers.			Hislop College.	Morris College.	Craddock College.	University.	Total.
Arabic	... { I. E. S., &c.	...	...	...	...	...	1
	... { S. C. S., &c.	...	1	...	...	...	1
	Total	...	1	...	1	...	2
History	... { I. E. S., &c.	...	1	1	1	...	3
	... { S. C. S., &c.	...	1	1	1	...	3
	... { J. C. S., &c.	...	1	1	...	...	2
	Total	...	3	3	2	...	8
Philosophy	... { I. E. S., &c.	...	1	1	1	...	3
	... { S. C. S., &c.	...	...	1	1	...	2
	... { J. C. S., &c.	...	1	...	...	...	1
	Total	...	2	2	2	...	6
Economics	... { I. E. S., &c.	...	1	1	1	...	3
	... { S. C. S., &c.	...	1	1	...	...	2
	... { J. C. S., &c.	...	...	...	1	...	1
	Total	...	2	2	2	...	6
Mathematics	... { I. E. S., &c.	...	1	1	1	...	3
	... { S. C. S., &c.	...	1	1	1	...	3
	... { J. C. S., &c.	...	...	1	1	...	2
	Total	...	2	3	3	...	8
Vernacular	J. C. S.	...	...	1	...	...	1
Physics	... { I. E. S.	...	...	...	...	2	2
	... { S. C. S.	...	...	...	...	4	4
	... { J. C. S.	...	...	...	...	8	8
	Total	...	...	...	...	14	14
Chemistry	... { I. E. S.	...	...	...	...	2	2
	... { S. C. S.	...	...	...	...	4	4
	... { J. C. S.	...	...	...	...	8	8
	Total	...	...	...	...	14	14
Botany and Zoology...	... { I. E. S.	...	...	...	...	2	2
	... { S. C. S.	...	...	...	...	4	4
	... { J. C. S.	...	...	...	...	8	8
	Total	...	...	...	...	14	14
Grand Total			18	19	19	42	98

Grand Total.				Hislop College.	Morris College.	Craddock College.	University.	Total.
I. E. S.	...	...	...	...	7	7	6	20
S. C. S.	...	...	...	...	8	7	12	27
J. C. S.	...	...	...	...	4	5	24	33
Missionaries	...	...	...	6	...	...	...	6
Missionary Teachers corresponding to S. C. S.	...	...	...	7	...	...	...	...
Missionary Teachers corresponding to J. C. S.	...	...	...	5	...	...	...	...
Total				18	19	19	42	98

Teachers of Science.

141. The teachers of science subjects should be, as indicated above, University officers and subject solely to the control of the University.

Teachers of honours and post-graduate subjects.

142. Teachers engaged in Honours and postgraduate subjects in Arts should be selected by the Syndicate from the college staffs (see paragraph 36).

All teachers members of colleges.

143. All teachers, however, including those who serve directly under the University, should be regarded as members of a college and take their due part in college life. The teachers who are directly under the control of the University should be eligible for membership of a College Council (see paragraph 190).

Law teaching staff.

144. The teaching staff for Law should consist of—

Rs.

A University Professor on	...	1,000—20—1,200
One Lecturer on	...	750—25—1,000
Three Lecturers on	...	400—20—600
One Tutor on	...	300

These teachers should be specially appointed by the Government on the recommendation of the Syndicate. They should not be members of the Government Educational Services.

University Readers.

145. The University should supplement its regular teaching by arranging for courses of lectures on special subjects by distinguished scholars who are not members of the permanent staff. The title of University Reader should be given to such lecturers.

The Robertson College, Jubbulpore.

146. The following staff will be required by the Robertson College at Jubbulpore :—

Subject.				Indian Educational Service.	Senior Collegiate Service.	Junior Collegiate Service.	Total.
English	...	...	...	1	3	2	6
Sanskrit	...	...	...	...	1	1	2
Persian	...	...	...	...	1	...	1
Arabic	...	...	...	...	...	1	1
History	...	...	...	1	1	1	3
Philosophy and Logic	...	...	...	...	2	1	3
Economics	...	...	...	...	2	...	2
Mathematics	...	...	...	...	2	1	3
Physics and Chemistry	...	...	...	1	1	3	5
Total				3	13	10	26

The addition of the Principal, who will be a member of the Indian Educational service, will bring the total up to 27.

147. The King Edward College at Amraoti will require a staff of twenty-two teachers, who are distributed as follows :— The King Edward College, Amraoti.

Subject.			Indian Educational Service.	Senior Collegiate Service.	Junior Collegiate Service.	Total.
English	...	...	1	2	2	5
Sanskrit	...	...	...	1	1	2
Persian	...	...	...	1	...	1
Arabic	...	...	...	...	1	1
History	...	...	1	1	1	3
Logic and Philosophy	...	...	...	2	1	3
Economics	...	...	...	2	...	2
Mathematics	...	...	...	1	1	2
Physics and Chemistry	...	...	...	1	2	3
Total			2	11	9	22
Add Principal	...	...	1	...	...	1
GRAND TOTAL			3	11	9	23

Notes.

148. In classifying the teachers of the University and the incorporated colleges according to services, we have followed the present division of Educational officers of Government into three grades, but have introduced two changes in nomenclature, the designations "Provincial Educational" and "Subordinate Educational" service being altered to "Senior Collegiate" and "Junior Collegiate" service respectively. We consider that these terms are more appropriate to the character of the work which the members of the two services will be called upon to perform, and will also serve to differentiate members of those services who are employed by the University from those who are directly under the control of Government.

See paragraph 131.

149. In the case of the Indian Educational and Senior Collegiate services, we have adopted, for the purpose of the financial estimate, the rates of pay which prevail at present, namely, Rs. 500—50—1,000 for the former, and Rs. 200—20—500 for the latter. We have had some difficulty in suggesting a rate of pay for the Junior Collegiate service, as no members of the Subordinate Educational service (to which the Junior Collegiate service corresponds) are employed in the existing Government Colleges, with the exception of four Science Demonstrators, and the prevailing rates of pay of that service are not, in our opinion, sufficiently high to attract men possessing the qualifications which we may reasonably expect to find in college teachers. After careful consideration we have arrived at the conclusion that all we can do, under present circumstances, is to suggest a rate of pay for the Junior Collegiate service which has some reference to the salary scale of the upper subordinate grades in other Government services, and to recommend that deserving members of the service should be entitled to promotion to the Senior Collegiate service. It will be difficult to recruit the stamp of man we require, unless we offer him prospects approximately as good as those which are open to him in other spheres of Government service. The actual pay which we have fixed for the purpose of our financial estimate bears to the pay of the Senior Collegiate service approximately the same relation that the pay of a Tahsildar bears to the pay of an Extra-Assistant Commissioner.

See paragraph 132.

150. In recruiting for the Junior Collegiate service, preference should be given to men who have been trained in the University, and special pains should be taken to secure the appointment of graduates who have shown capacity and zeal for advanced study and research. Such measures will strengthen the bonds between teachers and students, and make it possible to build up a school of learning which, in course of time, will develop a character of its own and create traditions that will profoundly influence the minds of all members of the University.

See paragraph 133. 151. We wish it to be understood that we have no desire to dictate to the Hislop College authorities the exact rates of pay which they should assign to the members of their teaching staff. But we consider it necessary, in the interests both of the Hislop College and of other affiliated colleges which may come under the jurisdiction of the University, to recommend that the salaries and prospects which they offer their staff shall be such as will attract a body of efficient teachers.

See paragraph 136. 152. Our reasons for recommending restrictions in the number of hours' instruction which should be assigned to the teachers are explained in paragraph 49 above. It may be noted that teachers of Arts subjects will generally both deliver lectures and give tutorial instruction.

See paragraph 138. 153. Our estimate of the number of teachers of Arts and Science subjects required in the University and the colleges is based upon the following factors :—

- (i) the nature of the courses ;
- (ii) the number of students offering each subject ;
- (iii) the length of the courses ;
- (iv) the number of hours' instruction per week devoted to each subject ;
- (v) the size of the classes ;
- (vi) the number of hours' instruction per week assigned to each teacher.

Suggested courses of study are given in Appendix III. The number of students will be found in Appendix IV. The length of the courses and the size of the classes have already been dealt with in Chapter V. The amount of work which may be assigned to each teacher is stated in paragraph 152. For the purpose of the estimate, we assume that the number of hours' instruction per week in each subject in the different stages of study will be as follows :—

A.—Arts courses—

(i) Intermediate—

Subject.		Hours of tutorial instruction.	Lecture hours.
English	...	5	1
Vernacular	...	1	...
Mathematics	...	5	...
Other subjects	...	4	1

(ii) B. A. Pass—

English	...	5	3
Other subjects	...	3	2

(iii) B. A. Honours—

Principal subject	...	1	12
Subsidiary subject	2

(iv) M. A.	...	1	12
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B.—Science courses—

(i) Intermediate—

Subject.	Hours of tutorial instruction.	Hours of practical work.	Lecture hours.	
English	...	5	...	1
Vernacular	...	1	...	...
Mathematics	...	5	...	...
Physics	...	1	4	2
Chemistry	...	1	4	2
Biology	...	1	4	2

(ii) B. Sc. Pass—

English	...	...	...	2
Chemistry	...	1	4	3
Physics	...	1	4	3
Botany	...	1	4	3
Zoology	...	1	4	3
Mathematics	...	3	...	2

(iii) B. Sc. Honours and M. Sc.—

Four lectures in the first year, and five lectures in the second and third years, of the course, and as much time as possible in the laboratory.

154. The estimate of teachers based upon the above factors does not include the Principals of colleges, who should be regarded as supplementing the strength of the teaching staff.

155. It may be added that in determining the number of teachers in Nagpur, we assume the existence of an inter-collegiate system of lectures and tutorial class work in the Intermediate and B. A. Pass courses. This will prevent overlapping and waste of staff.

156. The estimate of students in Nagpur taking Arts and Science courses amounts to 1,000 and of teachers to 98, giving an average of one teacher to rather more than 10 students. In the Robertson College the proportion is 1 teacher to rather more than 14 students, and in the King Edward College 1 to rather less than 14. The proportionately larger number of teachers in Nagpur is due to the fact that the University will provide Honours and postgraduate teaching for the students of all the colleges, whether in Nagpur or outside, who are qualified to take the courses. The greater proportion of Indian Educational service officers in the Nagpur colleges is due to the same fact.

157. The distribution of teachers, according to grades, among the three colleges in Nagpur is based on purely arithmetical considerations. That is to say, each college is given, as far as possible, the same number of teachers in each grade or rank of service. For example, we have assigned seven Indian Educational service officers to each of the two incorporated colleges and six missionaries (who will be of the same status as Indian Educational service officers) to the Hislop College, and similarly as regards the other grades. As it is impossible to assign exactly the same number of teachers in each grade to each of the three colleges, we have made the distribution in such a way that the expenditure on teaching staff will be greater in the case of the incorporated colleges. We desire to make it clear that the distribution of teachers which we propose is made solely for the purpose of the financial estimate, and should not be regarded as determining finally the number of teachers which should be employed by the Hislop College. The exact strength of the teaching staff of that college will depend upon the resources of the mission, and upon the amount of aid which it will receive from the Local Government. See paragraph 139.

See paragraph 144.

158. Our estimate of the staff that will be required for the teaching of Law is based on the following factors :—

- (a) the number of students will be 225 ;
- (b) the number of hours' instruction per week in a three years' course will be 14, consisting of 10 hours' lectures and 4 hours' tutorial class work ;
- (c) the maximum amount of instruction assigned to each teacher will be 14 hours per week.

We are of opinion that the teachers of Law should be appointed by Government on special terms, on the recommendation of the Syndicate, but should not be members of the Government Educational services. Our reasons for thus differentiating, the teachers of Law from other teachers of the University as regards the conditions of appointment, are two-fold. In the first place, in the event of Law teachers proving to be unsuited to their work, it would not be possible, as in the case of teachers of Arts and Science subjects, to transfer them to other branches of the Government Educational service, and, consequently, the University would be permanently saddled with the entertainment of teachers whose services were inadequate. In the second place, the University will find it difficult to secure men of the type required who will be prepared to devote their whole lives to teaching, as they are in the Educational service, whereas first class men will probably be willing to take up appointments for terms of years. A system of special appointments, moreover, will enable the University constantly to utilize the services of men whose experience of the courts is fresh and up to date, and thus to provide in some measure that practical training which is so necessary to students of Law who intend to enter the profession.

CHAPTER VIII.

THE UNIVERSITY CONSTITUTION.

Recommendations.

Chancellor, Vice-Chancellor, and Senate.

159. The government of the University should be vested in a Chancellor, Vice-Chancellor, and Senate.

Chancellor.

160. The Chief Commissioner of the Central Provinces for the time being should be the Chancellor.

Vice-Chancellor.

161. The Vice-Chancellor should be an honorary officer nominated by the Chancellor. He should hold office for two years, but should be eligible for re-nomination.

Composition of the Senate.

162. The Senate should be constituted as follows :—

- (i) The Chancellor.
- (ii) The Vice-Chancellor.
- (iii) Eight *ex-officio* members.
- (iv) Fourteen members nominated by the Chancellor.
- (v) Thirty-eight members of the teaching staff of the University and colleges nominated by the Chancellor.
- (vi) Fifteen graduates elected by registered graduates.

See paragraph 271.

Ex-officio members.

163. The *ex-officio* members of the Senate should be the following :—

- (i) The Financial Commissioner.
- (ii) The Judicial Commissioner.
- (iii) The Bishop of Nagpur.
- (iv) The Director of Public Instruction.
- (v) }
- (vi) } Four other officers of Government nominated by the Local
- (vii) } Administration.
- (viii) }

164. Of the 38 members of the teaching staff nominated to the Senate, 21 should represent the Faculties and 17 the college staffs :

Provided that, until such time as the number of colleges increases, beyond the six contemplated in this report, the Principals of the colleges, for which we make provision in our scheme, should be included among the 17 representatives of the college teaching staffs : and

Provided that tutors and demonstrators (see paragraph 134) should not be eligible for nomination.

165. The election of members of the Senate by registered graduates should be subject to confirmation by the Chancellor.

166. Members of the Senate, other than *ex-officio* members, should hold office for five years and be eligible for re-election or nomination. Period of membership.

167. The Senate should be vested with power—

Powers of the Senate.

- (i) to make new regulations, and changes in the existing regulations ;
- (ii) to make changes in the rates of fees charged by the University and the incorporated colleges ;
- (iii) to maintain colleges and university departments, and to administer public funds placed at the disposal of the University by the Local Administration for this purpose. Such colleges should be called Incorporated Colleges, and such departments should be called University Departments ; See paragraphs 22 and 62.
- (iv) to affiliate and disaffiliate colleges ; See paragraphs 22 and 62.
- (v) to pass the budget of the University, provided that it makes no change in the salary and allowances of any officer whose services are placed at its disposal by Government, or in the fixed grant sanctioned by the Government for a private college ; See paragraphs 23 and 130.
- (vi) to deal with all other matters pertaining to the University which are not expressly assigned to the Syndicate. See paragraph 172.

168. All resolutions of the Senate dealing with the following matters should be submitted to the Local Administration for sanction :—

- (i) additions to, or alterations in, the regulations,
- (ii) changes in the rates of fees,
- (iii) the affiliation and disaffiliation of colleges,
- (iv) the appointment of University Readers,
- (v) the conferring of honorary degrees.

169. Copies of all proceedings of the Senate should be submitted to the Local Administration for information.

170. The executive government of the University should be vested in the Syndicate. The Syndicate.

171. The Syndicate should be composed as follows :—

Composition of the Syndicate.

- (i) the Vice-Chancellor ;
- (ii) the Director of Public Instruction ;
- (iii) a member of the Senate nominated by the Chancellor ;
- (iv) four Principals of colleges, of whom one should represent the incorporated colleges in Nagpur, one the affiliated colleges in Nagpur, one the incorporated colleges outside Nagpur, and one the affiliated colleges outside Nagpur ;
- (v) the Deans of the Faculties ;
- (vi) three members of the Senate elected by that body, of whom one and not more than one should be a member of the teaching staff of the University or the colleges, and the other two should be non-officials. See paragraph 179.

Duties and functions of the Syndicate.

172. It should be the duty and function of the Syndicate—

- (i) to administer the funds and the property of the University on behalf of, and subject to the control of, the Senate;
- (ii) to keep the accounts of the University and submit them to such inspection and audit as the Senate and the Local Administration may direct;
- (iii) to conduct all correspondence relating to the business of the University;
- (iv) to draft such regulations as may be necessary from time to time, and to submit them to the Senate for approval;
- (v) to prepare the budget of the University, provided that it proposes no change in the salary of any Government officer or in the fixed grant sanctioned by the Government for any private college;
- (vi) to notify and make arrangements in accordance with the regulations for the election of members of the Senate by registered graduates, and for the election or appointment of members of the Syndicate;
- (vii) to manage the incorporated colleges and the university departments, subject to the general control of the Senate;
- (viii) to arrange for the appointment and posting of all Government officers, including (a) teachers in the incorporated colleges and in the university departments, and (b) superior administrative officers;
- (ix) to recommend Principals of incorporated colleges and Deans of Faculties for appointment by the Chancellor;
- (x) to select, in consultation with the Faculty, from the staffs of the colleges qualified teachers to give instruction in Honours and in postgraduate courses in the Arts faculty;
- (xi) to delegate powers of control necessary for the efficient administration of—
 - (a) the university departments of Science and Law, and any other university departments that may be constituted:
 - (b) other branches of university teaching which are not under the control of any other authority :—
 - (i) to the Deans of the respective faculties concerned in the case of (a):
 - (ii) to the University Professors of the Arts faculty in the case of (b):

Provided that such delegation is without detriment to the powers of any other duly constituted University or College authorities; and

Provided that all cases of dispute between a Dean of a Faculty or a University Professor and any other authority are referred to the Syndicate for final decision;
- (xii) to appoint, suspend, punish, or dismiss any member of the clerical, subordinate and menial staff of the University, and to delegate these powers, if it considers necessary;
- (xiii) to appoint examiners and to cancel any such appointments, to define the duties and powers of examiners, and to fix their remuneration;
- (xiv) to make due provision for examinations being conducted in accordance with the regulations of the University and for the supervision of such examinations, and to fix the remuneration of superintendents;

See paragraphs 36 and 142.

See paragraph 179.

See paragraph 186.

- (xv) to appoint teachers and other persons, to be members of Boards of Studies, and to appoint the chairman of each Board; See paragraph 175.
- (xvi) to refer any matter to a Faculty or Board, and to call upon the Faculty or Board for a report thereon;
- (xvii) to nominate University Readers, to define their duties and fix their remuneration, and to report any arrangements which they propose in these respects to the Senate for its sanction; See paragraph 145.
- (xviii) to recommend to the Senate that any person shall be admitted as a candidate to any university examination, without the certificate or certificates required by the regulations for admission to such examination;
- (xix) to take cognizance of misconduct by any student in a college or in the Non-Collegiate institution, or by any candidate for a university examination, which is brought to its notice by a responsible authority, and to punish such misconduct by exclusion from a university examination, or by deprivation of any university scholarship or endowment held by such person, or by expulsion from the University;
- (xx) to award university scholarships and prizes;
- (xxi) to recommend candidates for degrees;
- (xxii) to approve the arrangements made each session for teaching, including the arrangements for university and inter-collegiate lectures and tutorial classes; See paragraph 185.
- (xxiii) to issue, consistently with the university regulations, instructions relating to courses of study and methods of teaching;
- (xxiv) to make arrangements for the inspection of constituent colleges;
- (xxv) to call for information, in the case of any affiliated college, with regard to any proposed increase, alteration or reduction of its teaching staff, and to veto any proposal which may tend to impair the efficiency of the instruction given in any affiliated college;
- (xxvi) to make its own standing orders, and, subject to the regulations of the University, to regulate the disposal of its own business.

173. Members of the Syndicate (other than *ex-officio* members) should hold office for three years and should be eligible for re-election or re-nomination.

174. A Board of Studies should be constituted for each of the following subjects or groups of subjects :— Boards of studies.

- | | |
|---|--|
| (i) English. | (viii) Zoology. |
| (ii) History. | (ix) Botany. |
| (iii) Economics. | (x) Physics. |
| (iv) Philosophy. | (xi) Chemistry. |
| (v) Mathematics. | (xii) Teaching. |
| (vi) Sanskrit and derived vernaculars. | (xiii) Law. |
| (vii) Persian and Arabic and derived vernaculars. | (xiv) Classical and modern European languages. |

175. The members of each Board should be appointed by the Syndicate from among the professors and lecturers, and other persons possessing special knowledge of the subject or subjects with which the Board is concerned. The Syndicate should also appoint the chairman of each Board. No Board should consist of less than five or more than seven members.

176. It should be the duty of each Board to consider, and report on, any matter referred to it by the Syndicate.

177. Each Board should have power to submit, for the consideration of the Syndicate, any matter connected with the teaching of the subject or subjects with which it is concerned.

178. Members of the Boards of Studies should hold office for three years, and should be eligible for re-appointment.

Faculties.

179. Each Faculty should consist of all the members of the Boards of Studies comprised within the Faculty. The Chancellor should nominate, on the recommendation of the Syndicate, a chairman for each Faculty from among the University Professors of the Faculty. The chairman of each Faculty should be entitled Dean of the Faculty.

180. It should be the duty of each Faculty to consider, and report on, any matter referred to it by the Syndicate, and, at the request of the Syndicate, to refer any matter to a Board of Studies comprised within the Faculty, for consideration and report.

181. Any matter concerning more than one Board of Studies should be referred by the Syndicate to the Faculty concerned rather than to the Boards of Studies. The Dean of a Faculty should have the right of appeal against any reference to a Board of Studies on the ground that it should have been made to the Faculty, and this appeal, if not accepted by the Syndicate, should be referred to the Senate for final disposal.

182. Each Faculty should have power to submit for the consideration of the Syndicate proposals relating to any matter concerned with the teaching of any subject or group of subjects falling within its scope.

183. Each Faculty should meet not less than twice a year.

184. Members of the Faculties should hold office for three years.

Board of Inter-Collegiate Lectures.

185. A Board should be constituted for the purpose of making arrangements for inter-collegiate lectures in Nagpur. It should consist of the Principals of the Nagpur colleges, three persons appointed by the Faculty of Arts and three by the Faculty of Science.

Boards and Committees.

186. The following Boards and Committees should be Constituted by regulation. They should be appointed by, and directly subordinate to, the Syndicate :—

- (i) Committee for students' affairs.
- (ii) Committee for the maintenance of grounds and buildings.
- (iii) Finance board.
- (iv) Library committee.
- (v) Board for the inspection of colleges.
- (vi) Appointments board.
- (vii) Board for the investigation of the financial circumstances of applicants for bursaries.
- (viii) Non-collegiate advisory board.
- (ix) Boards of examiners.
- (x) Board of moderators.

See paragraph 211.

See paragraph 220-(i).

187. Members of the above Boards should hold office for three years, and should be eligible for reappointment.

188. The Registrar should be a member of the Indian Educational service.

189. The Registrar should—

- (i) be in charge of the university office, and the records, correspondence and accounts of the University ;
- (ii) act as secretary to the Senate and Syndicate ;
- (iii) perform such other duties as may be from time to time prescribed by the Syndicate.

190. Each college should have a Council composed of all teachers on or attached to its staff, except tutors and demonstrators [(vide paragraph 134 (iv))]. Teachers who are members of a college council should be called Fellows of the college. College Councils.

The Chancellor should nominate certain of the Fellows of each college as members of the Senate. See paragraphs 163 and 164.

191. The authorities of a college should have the power to appoint as Fellows persons who are not members of the teaching staff, but such persons should not be eligible for nomination to the Senate as representatives of a college.

192. The following financial system should be followed in the University Financial system.
(vide paragraph 24) :—

A. — RECEIPTS.

The receipts should be classified as follows :—

- (i) A fixed Government grant to defray the cost of the permanent teaching and superior administrative staff of the University and the incorporated colleges.
- (ii) A fixed Government grant to secure the maintenance of the University and the incorporated colleges, apart from the teaching staff.
- (iii) A fixed Government grant for the Hislop College.
- (iv) Such grants as the Government may make from time to time for special purposes.
- (v) Endowments.
- (vi) University fees, fees of the incorporated colleges and other University receipts.

All Government grants should be paid annually by Government into the University funds. The grant for the Hislop College should be payable by the Senate to the college, and the college authorities should have power to employ it for any purposes they choose, provided that they meet the educational requirements of the University. Receipts under heads (v) and (vi) should be credited to the University funds.

B. — EXPENDITURE.

The expenditure should be classified as follows :—

- (i) Expenditure (a) on the permanent teaching and superior administrative staff of the University and the incorporated colleges ; (b) on the Hislop College ; (c) on special purposes for which grants are made by Government.
- (ii) Other expenditure.

Expenditure under head (i) would be simply the utilization of grants, (A) (i) (iii) (iv) for the purposes for which they are respectively allotted by Government. Other expenditure should be budgeted for and incurred without reference to Government.

The members of the permanent teaching and superior administrative staff of the University and the incorporated colleges will be officers lent to the

University by the Government, and will receive their salaries from the University funds. If the Senate at any time wished to increase the permanent staff, the increased expenditure should be met in one of three ways, *viz.* :—

- (a) by obtaining from Government an increase in grant A (i) (see above); or
- (b) employing for the purposes any savings which may be effected under head (ii) of expenditure; or
- (c) from other University funds, *e. g.*, endowments.

Notes.

193. According to the constitution outlined above, the management of the colleges maintained from public funds, which would ordinarily be called Government colleges but which are called in this report Incorporated colleges, will be vested in the University, and funds will be placed at the disposal of the University by the Local Administration for this purpose. They will be administered by the Syndicate, *i. e.*, the executive body of the University, subject to the general control of the Senate. The relations of the Syndicate to these colleges will be much the same as the present relation of the Director of Public Instruction to these colleges. Under the proposed constitution, the Director will be responsible for the administration of these Colleges only as a member of the Syndicate and the Senate. The only exception is the Government Training College at Jubbulpore, which, for reasons stated in paragraphs 123 and 124, will continue to be administered by the Education Department, and will not be under University management, but merely subject to the general control of the University like other affiliated colleges.

The management of the university departments of Science, Law and Physical Education will similarly be in the hands of the Syndicate, subject to the general control of the Senate.

194. In all questions, except those relating to the permanent staff, the University through the Syndicate should correspond directly with the Local Administration. For the sake of convenience, correspondence on all matters relating to the appointment, transfer or removal of Government officers should be conducted through the Director of Public Instruction. With regard to this point, it may be added that the Syndicate should be informed before any Government officer is transferred from the service of the University, and should be entitled to make recommendations in matters connected with the staff [see paragraph 172 (viii)].

See paragraph 164.

195. It is necessary, in our opinion, to give separate representation to the Faculties and the colleges on the Senate, on the ground that the Faculties are University bodies representing the interests of the University as a whole, while the colleges are, in a sense, particularist. When the University comes into existence, there will be six colleges (including the Training College in Jubbulpore). We recommend that, while the number of colleges remains the same, each college except the Training College should be represented on the Senate by its Principal and two members of the College Council (see paragraph 190). The Training College, which will be a comparatively small institution, should be represented by its Principal and one member of the staff. It will be advisable, in the early years of the University, to place the Principals of all colleges on the Senate, as otherwise it will be difficult to secure an adequate number of teachers possessing the requisite weight and experience. But if the number of colleges increases, the Chancellor will have a wide field of selection, and it will no longer be absolutely essential that all heads of colleges should, by virtue of their office, be included among the members of the Senate. It may be presumed that, as a general rule, the Chancellor will nominate the Principals to represent their colleges, even when he has a wide field of selection. In any case he will see that those Principals, whose services are required on the Syndicate, are also nominated as members of the Senate.

196. At first there will be only one affiliated college, namely, the Hislop college, in Nagpur, and one, the Training College, outside Nagpur. The constitution, however, provides for an expansion in the number of colleges. See paragraph 171 (iv).

197. For administrative reasons, it will be necessary to make a single University Professor responsible for the management of each university department, subject to the control of the Syndicate. Thus the University Professors who are appointed Deans of the Faculties of Science and Law will be in charge of the Science and law departments, respectively. The Director of physical education will administer the department of physical education. Similarly, the University Professors in the Faculty of Arts will be in charge of the seminars of the University. We consider that the administrative duties of the Dean of the Science Faculty, will be sufficiently onerous to justify the consideration of a special allowance being made to him, if such allowances are granted to the Principals of incorporated colleges. See paragraph 172 (xi).

198. The clerical, subordinate and menial staff will not be in Government service, but will be directly employed by the University out of funds provided by the Government [see paragraph 192 (A) (ii)], or from its own resources [see paragraph 192 (A) (v)]. They should be subject to the ordinary rules as regards pensions or gratuities. The Syndicate should be permitted to delegate powers of control over this staff to the Principals of colleges or the Deans of the Faculties, if it considers that such delegation will promote efficiency of administration. See paragraph 172 (xii).

199. (i) The Committee for Students' Affairs will deal with all matters connected with the social life, conduct and health of the students, including discipline outside the colleges, physical training and university societies. See paragraph 186.

(ii) The Maintenance Committee will deal with the buildings, grounds, roads and playing fields of the University. It will also supervise the arrangements for water-supply, sanitation and lighting. See paragraph 186.

(iii) The Finance Board will supervise the accounts of the University, prepare the budget, and generally advise the Syndicate in all financial matters.

(iv) For the Library Committee see paragraph 242.

(v) The Appointments Board will assist students, as far as possible, to secure employment on leaving the University.

(vi) A Board of Examiners will be appointed for each subject or group of subjects of examination.

(vii) The Board of Moderators will consist of the chairmen of the Boards of Examiners.

200. The financial system which we recommend is designed to secure a considerable measure of financial autonomy for the University. Apart from the fixed Government grants for special purposes, such as the payment of salaries and the grant-in-aid to the Hislop College, we propose that the University shall have complete freedom in the disposal of its funds. We see no reason to anticipate any attempt to abuse this freedom, but any such attempt would be prevented effectually by--- See paragraph 192.

(a) the strong representation of the Government on the Senate and the Syndicate; See paragraphs 162 and 171.

(b) the ultimate dependence of the University on the financial support of Government;

(c) the submission of the University accounts to Government audit; See paragraph 172 (ii).

(d) the submission of all regulations of the University (including changes in the rates of fees) to the Government for sanction. See paragraph 168.

CHAPTER IX.

THE COLLEGIATE SYSTEM.

Recommendations.

Colleges essentially residential. 201. No college should be affiliated to, or incorporated with, the University, unless it provides residential accommodation for its student members; and, provided that facilities are created for the residence of poor students, all undergraduate students, except those who live in the town with guardians approved under regulations of the University, should be compelled to reside in college. It is desirable that undergraduate students whose guardians live in the town should also, as far as possible, reside in college. In the case of graduate students, residence in college should be optional.

Facilities for residence of poor students. 202. Facilities should be provided for students of humble means to reside in college by (a) the establishment of bursaries, and (b) the formation of messes suited to their style of expenditure. There should be three classes of messes, involving a monthly expenditure of Rs. 14 or over, Rs. 10 and Rs. 6-8-0, respectively. The bursaries should be Rs. 4 per month, a sum which is calculated to cover the difference between the lowest rate of expenditure involved by residence in college and the cost of board and lodging in the town for the poorest class of students.

Students' rooms. 203. The living rooms of the students should be of two kinds, namely, (a) rooms for four, and (b) rooms for one.

Establishment charges. 204. All students should pay an establishment charge of Rs. 2 per month, and for this they should be supplied with furniture, light, medical attendance, service, and kitchen utensils. Those who occupy separate rooms should, in addition, pay a rent of Rs. 1-8-0 a month.

Co-operative stores. 205. The expenses of residence in college should be kept down in all possible ways, and, in particular, by the establishment of a co-operative store for the supply of articles in common use. Such a store, which should be managed by a committee containing a large representation of students, would also have considerable educative effect by giving its members a training in business methods and in the general principles of co-operation.

Medical attendance. 206. Arrangements should be made for medical attendance.

Games. 207. Games should be encouraged in every possible way, and every student should be given the chance of taking part in them. They should be so organized as to promote physical development, and, at the same time, to encourage the growth of that collegiate spirit which often finds its best expression in the rivalry of the playing field. We, therefore, make provision for playing fields, tennis courts and a pavilion for each college.

Common rooms. 208. Social life among the students should be fostered by the provision of common rooms and the encouragement of societies of various kinds. We recommend that a common room be provided for every 100 students, and every member be required to make a small contribution of 4 annas a month for the supply of magazines, newspapers and in-door games.

The Preceptorial system. 209. Facilities should be created for the effective supervision of the students and for close and friendly intercourse between them and the teachers by the establishment of a preceptorial system. We recommend that one Preceptor should be appointed by the Principal of the college for every 50 students. Accommodation should be provided for three or four such Preceptors in the precincts of each college. It should be the duty of the Preceptors—

- (a) to see the students in their charge as often as possible;
- (b) to deal with their applications in regard to leave, etc.;
- (c) to keep registers of their attendance, conduct, health, examination, results, etc.;
- (d) to submit a terminal report regarding each student to the Principal.

As the proper performance of these duties will require special qualifications, the Preceptors should be very carefully selected, and all members of the teaching staff, whether directly under the control of the University or of a College, should be allowed to co-operate in this most important work.

210. The residential system, which we propose, necessitates the provision of accommodation for the Principals of the colleges, and for those teachers who will be engaged in preceptorial work, but will reside out of college. It is also desirable that residential quarters should be provided for all other members of the teaching staff, as soon as such provision is financially possible, and we have included them in our building plans and estimates. Residential accommodation for the teaching staff.

Notes.

211. We are convinced of the value of the residential system for under-graduates, and we recommend that every facility shall be afforded to poor students to avail themselves of its advantages, whether in Nagpur or in the external colleges. The most cogent reason which is urged against compulsory residence is that it entails expenses which are too heavy for the poorest class of students. We are of opinion that this difficulty will be overcome by a liberal award of bursaries, and by keeping messing expenses down in the manner we suggest. The principle of the bursary is that it should cover the difference between the lowest rate of expenditure involved by residence in college and the cost of living in the town to the poorest students. After careful investigation, we have ascertained that the average monthly expenses of board and lodging for this class of students amount to six rupees. Our inquiries lead us to think that it will be possible to establish college messes for students of humble means which will involve a monthly expenditure of not more than six rupees eight annas. In addition to this, poor students will have to pay two rupees a month for establishment charges, and one rupee eight annas on account of the higher standard of living entailed by residence in college. Thus, apart from tuition and other fees which he would incur in any case, the poor student will be able to enjoy all the advantages of collegiate life at a cost which does not exceed his ordinary expenditure by more than Rs. 4 a month. We recommend, therefore, that a bursary should be of this amount, but, as a student will not be in residence for more than nine months in the year, we consider that it should be paid only for that period. A student should hold a bursary throughout his whole undergraduate course, provided he satisfies the Principal of his college that he is profiting by his studies. See paragraph 202.

The award of bursaries to students desiring to enter a Nagpur college should be made by the Syndicate on the recommendation of a special board for the investigation of the financial condition of applicants. In the case of students seeking admission to an external college, such investigation should be conducted by the Principal who should submit his recommendations to the special board.

We estimate that the number of students both in Nagpur and in the external colleges who will require bursaries will amount to 25 per cent of the undergraduates, and that the annual cost will be Rs. 15,000.

212. We have made provision in our building scheme for messes in each of the Nagpur colleges for students of the Maharatta community (who will constitute the bulk of the students), for non-Maharatta Hindu, and for Muhammadan, students. Special arrangements can be made for Christian students. Each mess will have its own dining room, kitchen, store-room and fuel-room, and will be provided with cooks and general servants. See paragraph 202.

213. There will be considerable scope for co-operative supply stores both in the University and in the external colleges, and such institutions should go far towards reducing the expenses of collegiate life. Managed by the students themselves under proper supervision, they will be self-supporting and will require no financial assistance once they are started. It will be necessary, however, to provide each centre with a small building, and we have included this in our estimate of capital expenditure. See paragraph 205.

See paragraph 206. 214. The medical staff of the University in Nagpur will consist of an Assistant Surgeon, a Sub-Assistant Surgeon, a compounder and a dresser, who will live in the university area. Each of the external colleges will also have a medical staff. It will be necessary to provide a dispensary and a small hospital for in-door patients in each centre. The medical staff both of the University and of the external colleges should be in constant touch with the Director of physical education whose functions are described in paragraph 234.

See paragraph 209. 215. The Preceptors who will reside in college should be selected from the members of the Senior and Junior Collegiate services and we have included in the plans of the college buildings four sets of quarters for two members of each of these services. The quarters will be suitable for married men, and are designed to secure the utmost possible privacy consistent with the nature of the work which the Preceptors who live in college will be expected to perform. No rent should be charged for these quarters.

See paragraph 210. 216. One of the main conditions of the residential system which we propose is the provision of facilities for close and friendly relations between the teachers and the students. It is essential to the success of that system that the teachers should enter thoroughly into all the varied activities of university and college life. They should play their part in the playing field and in the social club no less than in the laboratory and the class room. It is only by identifying themselves with the general interests of their pupils that the staff can come to know them individually, and thus attain that influence over their lives which is so essential a factor in the development of their moral, social and intellectual being. "A University is, according to the usual designation, an Alma Mater, knowing her children one by one, not a foundry or a mint, or a treadmill".

We are strongly of opinion that this intimate relationship between staff and students can be secured only by enabling the teachers to reside in or near the colleges. It will be impossible if the teachers live far away, whether in the city or in the civil station. While, therefore, we consider that a beginning might be made by providing accommodation for the Principals and those teachers who are directly engaged in preceptorial work, we look forward to the time when it will be possible to supply residences for the whole teaching staff.

We recommend that Principals and Preceptors (who live out of college) should occupy their bungalows rent-free. For the rest of the staff rents should be charged at the ordinary rates, the maximum charge not exceeding 10 per cent of the salary of the teacher. We consider, however, that, both on technical and on general grounds, the residences of members of the Indian Educational service should be built on a somewhat more extensive scale than those which are assigned, under existing rules, to officers drawing the same rate of pay. For the teachers will be permanent residents, occupying their bungalows, it may be, for 20 years, and they will, for the greater part of their service, draw salaries in excess of the average pay which, under present rules, determines the size of the quarters allotted to them. Moreover, the extra accommodation which we propose will be a form of remuneration for the extra duties that will be imposed on them by the establishment of the residential system.

CHAPTER X.

NON-RESIDENT STUDENTS.

Recommendations.

Guardians. See paragraph 201. 217. All undergraduate students who do not reside in college should live with guardians approved under regulations of the University.

Non-collegiate Institution in Nagpur. 218. All non-resident students in Nagpur should be members of the Non-collegiate Institution for social and disciplinary purposes, but those who take the Intermediate and Pass degree courses in Arts and Science should be attached to colleges for the purpose of instruction.

219. A special university officer to be known as the Warden (who should be a member of the Indian Educational service) should be placed in charge of the Non-collegiate Institution. The Warden in charge of the non-collegiate institution.

220. The duties of the Warden should be :—

Duties of the Warden.

- (i) To receive and consider the applications of candidates for admission to the University who do not intend to reside in college. Before admitting such students, he should ascertain, firstly, whether they satisfy such conditions of admission as the University may prescribe; secondly, whether, in the case of Intermediate and Pass degree students, the Principal of a college has undertaken to admit them to his college for the purpose of instruction; and, thirdly, whether they live with guardians who are approved under the university regulations. In the last inquiry the Warden should be assisted by an advisory board consisting of Indian gentlemen nominated by the Syndicate.
- (ii) To arrange for the admission of non-collegiate students to the honours and post-graduate courses of instruction provided by the University.
- (iii) To receive periodical reports regarding the attendance and progress of honours and post-graduate students from the teachers whose classes they attend, and to take action on such reports.
- (iv) To maintain discipline among non-collegiate students.
- (v) To organize and control the games of non-collegiate students, and to see that the students attend the compulsory periods of physical exercise (see paragraphs 230 and 231).
- (vi) To maintain close and friendly relations with the students under his charge.

221. In addition to the above duties, which relate specifically to the non-collegiate students, the warden should—

- (i) take notice of, and if necessary report to the authorities concerned, cases of misconduct of college students beyond the college precincts;
- (ii) act as president of the University Athletic Association and of the University Maintenance Committee (see paragraphs 186 (ii) and 254);
- (iii) organize university social functions.

222. The Non-collegiate Institution should occupy a portion of the university building. Building for the non-collegiate students.

223. The conditions of corporate life should be provided, as far as possible, for non-collegiate students, and they should be encouraged to take a part in the social activities of the University as a whole. The playing fields of the University should be open to them (see paragraph 258). Participation of non-collegiate students in university life.

224. Non-resident students in the external colleges should be members of the colleges for social and disciplinary purposes as well as for the purpose of instruction, and the preceptorial system (see paragraph 209) should provide for their supervision outside the class room. Non-resident students in external colleges.

Notes.

225. We consider that graduate students, who are members of the Non-collegiate Institution, should not be subject to precisely the same discipline as undergraduates. Thus, while it is imperative that undergraduates should reside with guardians, such a rule should not necessarily apply to graduates, as they will, in See paragraph 217.

general, have reached an age when they may be expected to look after themselves. At the same time precautions should be taken to prevent graduates from residing with persons whose influence is known to be injurious. The University, however, may be expected to provide in its regulations for all questions concerning the residence and conduct of graduate students.

See paragraph 218. 226. It is important to note that non-collegiate students in Nagpur will enjoy the same facilities, as regards instruction, as the students who reside in college. Those who take courses provided by the colleges will be permitted to join any college they choose, provided they obtain the permission of the Principal, and in all matters which concern their studies and attendance at courses of instruction they will be subject to the jurisdiction of the college to which they are attached. But in other respects they will have a separate organization. They will have their own common room, their own tennis courts, and their own arrangements for games. At the same time they will, as members of the University, enjoy all the privileges which that body, as distinguished from the colleges, affords. They will be admitted to the gymnasium and the Students' Union on the same terms as collegiate students, and, like them, will be eligible for membership of the university teams (see paragraphs 238, 252 and 254).

CHAPTER XI.

PHYSICAL EDUCATION.

Recommendations.

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|-----------------------------------|---|
| Department of physical education. | 227. There should be a University Department of Physical Education. |
| Duties of the department. | 228. The duties of this department should be twofold :— |
| Medical examination. | (i) The medical examination of all students, whether in Nagpur or in the external colleges, on admission to the University. Systematic records should be kept of the measurements of the students and of other results of the examination, which should be used as a guide to training and for statistical purposes. |
| Physical training. | (ii) The training of all students, whether in Nagpur or in the external colleges, in physical development. The training should be both theoretical and practical. |
| Theoretical instruction. | 229. The theoretical instruction should consist of the elements of physiology and anatomy, and should embrace the first principles of the hygiene of the individual and the community. This instruction should be given in the first two years of the student's career, and an examination should be held at the end of the course. |
| Physical exercises. | 230. The physical training should consist of three hours of compulsory exercise a week. The results of the medical examination should be employed to determine the kinds of exercise suitable for different students. For some students the exercises will be of a therapeutic nature. |
| | 231. The compulsory course of physical exercise should extend over one year. At the end of the course an examination should be held, and students should be required to go through a second year's course, if they are negligent in the first year. |
| | 232. At the same time, students should be encouraged to take part in games. At the end of the compulsory course, they should have the option of continuing the physical exercises or playing games. In any case, they should be required to take regular physical exercise for an hour three times a week during the remainder of their undergraduate course. |

233. The staff required for the above duties should consist of—

Staff.

- (i) A Director of physical education who should be head of the department and a member of the Indian Educational service. His head-quarters should be in Nagpur.
- (ii) Three gymnastic instructors who should be members of the Junior Collegiate service. Of these, one should be in Nagpur, one in Jubbulpore and one in Amraoti.

234. The duties of the Director of Physical Education should be—

Duties of the Director of Physical Education.

- (i) to organise, control and supervise the department of physical education ;
- (ii) to exercise a general supervision over the health and hygiene of the University and the colleges ;
- (iii) to deliver courses of lectures on elementary hygiene ;
- (iv) to organise University games and athletic sports.

He should be entitled to the assistance of the medical staff of the University and the external colleges in all matters relating to the health of the students, so far as they may concern the department of physical education.

235. The gymnastic instructors should work under the control and supervision of the Director.

Gymnastic Instructors.

Notes.

236. In devising the scheme of physical education outlined above, we have had the valuable assistance of Mr. E. Carter, Secretary of the Young Men's Christian Association, Calcutta. In its main features, the scheme is an adaptation of the system which prevails in the leading American universities.

237. The Director of physical education should be, if possible, a medical man who has had a special training in physical development. The pay and prospects of the Indian Educational service should be sufficient to attract an officer with the requisite qualifications. The holder of the appointment should have the same status as a University Professor.

238. The physical exercises will be conducted in gymnasiums. The University gymnasium will comprise—

See paragraph 230.

- (i) a central hall of 90 by 120 feet ;
- (ii) offices for the Director of Physical Education and the gymnastic instructor ;
- (iii) an examination room and a room for corrective and physical deficiency exercises ;
- (iv) spaces for washing and cleaning.

Connected with the gymnasium building will be a swimming tank of the dimensions of 75 by 30 feet, with a complete refiltering plant.

Gymnasiums of the same type, but on a smaller scale, should be provided for the colleges in Jubbulpore and Amraoti.

CHAPTER XII.

LIBRARIES, MUSEUMS AND CLUBS.

A.—LIBRARIES AND MUSEUMS.

Recommendations.

239. There should be three classes of libraries—

Classes of libraries.

- (i) A University library.
- (ii) Seminar and laboratory libraries.
- (iii) College libraries.

- Character of the university library.** 240. The University library should contain more advanced and more expensive books than the college libraries, and should not contain any books that are placed in college libraries except such works of reference as the teaching staff may require.
- Accommodation.** 241. Provision should be made in the University library building for—
 (i) a store room for books,
 (ii) a reading room for students,
 (iii) a reading room for members of the teaching staff,
 (iv) a room for periodicals,
 (v) offices for the Librarian and his staff.
- Librarian.** 242. The Librarian should be a member of the Senior Collegiate service.
- Seminar and laboratory libraries.** 243. The seminar and laboratory libraries should contain, as far as possible, complete sets of works of reference relating to the courses of instruction with which they are concerned.
- College libraries.** 244. College libraries should contain works of general culture and ordinary works of reference relating to the courses of instruction up to the B. A. and B. Sc. pass standard.
- Library committee.** 245. The University and seminar libraries should be placed in charge of a library committee, the members of which should be appointed by the Syndicate. The committee should also control the allotment of funds to the various college libraries, and advise generally on questions connected with their maintenance and management.
- University Art Museum.** 246. The University should have an Art Museum, containing, among other things—
 (i) casts of representative eastern and western sculptures;
 (ii) reproductions of representative eastern and western pictures, and original works of the modern school of Indian painting;
 (iii) models and photographs of representative eastern and western architecture.
247. The Art Museum should be located in the University building and should be under the control of the library committee.
- Relation of the University with the Nagpur museum.** 248. Facilities for research should be created by the enlargement and reorganization of the local museum, and by establishing a close connection between that institution and the University (see paragraph 251).

Notes.

249. An estimate of initial and recurring expenditure on the libraries and the Art Museum is given in Appendices VII and VIII.

250. The Victoria Technical Institute at present contains a valuable collection of works of scientific interest known as the Second Class Scientific Library, and the question arises whether this collection should not be taken over by the University. It does not lie within our terms of reference to make any recommendation on this point. But we are of opinion that when the University comes into existence, the question of the relations between the University library and the library of the Victoria Technical Institute should be referred to a joint committee consisting of representatives of the University and the Scientific Library. It would in any case be desirable that the University library should absorb all those books which are not required by other institutions.

251. The promotion of advanced study and research is an essential feature of our scheme, and in those branches of study such as economics, history, etc., in which it is possible, we consider it desirable to bring the teaching into touch with actual local conditions. But it is obvious that any attempt to make collections on a scale sufficiently large for this purpose, independently of the existing museum, would add considerably to the cost of the University and involve unnecessary duplication. Under these circumstances, we are of opinion that the best plan would be to enlarge and reorganize the local museum, and bring it into close and definite relations with the University, in the manner described below.

We understand that, according to present proposals, the following sections will be represented in the museum in the immediate future :—

- (i) Natural History—Zoology.
- (ii) Ethnology.
- (iii) Archæology—
 - (a) Sculptures.
 - (b) Inscriptions.
 - (c) Coins.

In order to make the museum a useful adjunct to the University, it will be necessary to add the following sections :—

- (iv) Economics.
- (v) Botany.
- (vi) Geology.

A certain amount of material for these sections is available in the Victoria Technical Institute. This should be transferred to the museum, and considerable additions should be made with a view to making the sections thoroughly representative of the industries of the Province. In the other sections, also, the resources of the province should receive adequate representation.

With regard to the administration of the museum, we consider that it will be best to leave it in the hands of the Director of Agriculture. But in order to bring the museum into close touch with the University, it will be advantageous to place each section under the immediate charge of the University Professor of the subject to which it relates, the Professor acting as honorary superintendent.

We have not included in our financial estimate the cost involved by these proposals.

B.—UNIVERSITY CLUBS.

Recommendations.

252. There should be a Students' Union in Nagpur open to all members of the University. Students' Union.

253. A club for members of the teaching staff should also be established. University teachers' club.

254. There should be a University Athletic Association for the control of the university playing fields, for the management of university matches, and for the selection of university teams. University athletic association.

255. Members of the external colleges should be eligible for membership of the various clubs, and for selection in the university teams. Participation of external college students.

Notes.

256. A Students' Union will be of invaluable service to the social life of the students of the various colleges in Nagpur, and will be a centre of intercourse between them and the students of the external colleges, when the latter visit the central university. We have provided, in our estimate, for a commodious building which will be situated near the university athletic ground and will serve both as a club house and a pavilion. See paragraphs 262 and 263 for fee for membership.

257. A club house for the teachers will also be required, and we have made provision accordingly in our estimate of buildings.

258. The University, as distinct from the colleges, will have an athletic ground, where all athletic sports and inter-university matches can be held. The ground will also be available for non-collegiate students. It will be one of the duties of the Warden to act as president of the Athletic Association. The ground will be maintained by the University ; other expenditure will be met by contributions from the college athletic clubs (see paragraph 274).

CHAPTER XIII FEES AND SCHOLARSHIPS.

A.—FEES.

Recommendations.

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|---|--|
| Classification. | 259. The fees payable by students of the University should comprise— |
| | (i) University fees. |
| | (ii) College fees. |
| | (iii) Club fees. |
| University fees. | 260. The following fees should be payable to the University :— |
| | (i) University entrance fees. |
| | (ii) Tuition fees for post-graduate courses. |
| | (iii) Graduates' registration fees. |
| | (iv) Examination fees. |
| College fees. | 261. The following fees should be payable to the colleges :— |
| | (i) Tuition fees for undergraduate courses (pass and honours). |
| | (ii) Residential fees. |
| | (iii) Games and common room fees. |
| Non-collegiate students in Nagpur should pay tuition fees to the colleges to which they are attached, in the case of pass courses, and to the University, in the case of honours courses. Games, and common room, fees they should pay to the Non-collegiate Institution. | |
| Students' Union fee. | 262. Students in Nagpur should pay a fee for membership of the Students' Union. |
| University entrance fee. | 263. The University entrance fee should be Rs. 2. |
| Tuition fees. | 264. For Tuition fees for the undergraduate courses see paragraph 272. |
| | 265. The tuition fee for all graduate courses should be Rs. 8 a month, except those provided in the Training College (see paragraph 124). |
| | 266. All tuition fees should be levied for twelve months in the year. |
| Residential fees. | 267. The residential fee should be Rs. 2 a month for students sharing rooms, and Rs. 3-8-0 for those occupying single rooms. It should be payable for twelve months in the year by all resident students, except holders of bursaries. |
| Games, club and common room fees. | 268. The fees for games and social purposes should comprise— |
| | (i) a games fee of Rs. 4 per annum, |
| | (ii) a college common room fee of Rs. 2 annas 4 per annum, |
| | (iii) a Students' Union fee of Rs. 2 per annum. |

269. Graduates should pay a fee of Rs. 10 on taking their degree, and an annual fee of Rs. 2 to keep their names on the books, or a composition fee of Rs. 20 for permanent registration. Graduates' registration fees.

270. The rates of examination fees should be as follows :—

Examination Fees.

	Rs.
Intermediate arts & science	20
B. A. & B. Sc. pass and honours	...
M. A. & M. Sc.	30
D. Litt. & D. Sc.	100
Preliminary	20
Intermediate } LL. B.	20
Final	20
LL. M.	100
LL. D.	200
L. T.	20

Notes.

271. The rates of the University entrance and graduates' registration fees are the same as those levied by the University of Allahabad. The entrance fee will be paid by each student for registration as an undergraduate. Payment of the graduates' registration fee for five years will entitle a Bachelor of the University to elect, and stand for election, to the Senate. A graduate who has taken the degree of Master in any faculty will acquire the franchise immediately on registration. See paragraphs 263 and 269.

272. The prevailing rates of tuition fees for undergraduate and graduate courses in the Provinces are as follows :— See paragraphs 264 and 265.

		Undergraduate courses.	M. A. and M. Sc. courses.	Law courses.
		Rs. a.	Rs. a.	Rs. a.
Government,	Jubbulpore College	6 4	...	...
Aided ...	{ Hislop College	5 4	6 0	...
	{ Morris College	5 4	5 4	6 4

These rates were fixed by Resolution No. 920, dated the 4th June 1911, of the Local Administration. But in the same Resolution it was laid down that, in five years' time, the fees for undergraduate and M. A. and M. Sc. courses should be raised to Rs. 7-8-0 and Rs. 6-8-0 for the Government and aided colleges respectively, and the fees for law courses to Rs. 7-8-0.

In view of this Resolution, we have decided to adopt, for the purpose of the financial estimate, the rates prescribed from 1916 onwards for undergraduate tuition fees in the Government and aided colleges. We consider, however, that the rates for post-graduate courses should be higher than those for undergraduate courses, and we have made a recommendation accordingly. We assume that the Government Resolution does not prevent colleges under private management from charging the higher rate prescribed for Government colleges, if they desire to do so.

273. The residential fee of Rs. 2 will be the same as at present. In return for this small monthly charge, students will be provided with rooms, furniture, light, medical attendance, and service. Those who occupy single rooms will pay an additional Rs. 1-8-0 a month. As bursary holders will receive their bursaries for only nine months in the year (see paragraph 211), they will pay the residential charge for the same period. See paragraph 267.

See paragraph 268.

274. The general principle which we have adopted in assessing the games fee is that the University should maintain the playing fields and the gymnasium and should make an annual grant designed to cover a part of the other expenditure on games, the remainder being met by the fees of the students. The university grant should be Rs. 300 per annum to each college. A games fee of Rs. 4 levied from all undergraduate members of the University will suffice to meet the remaining expenditure. The fee should be payable to the colleges and to the non-collegiate institution in the case of collegiate and non-collegiate students, respectively.

The common room and Students' Union fees, which are assessed very low, will serve to cover expenditure on magazines, newspapers, indoor games and entertainments. Non-collegiate students should pay the common room fee to the Non-collegiate Institution. Students of the external colleges should pay a small fee for the use of the Students' Union when they visit Nagpur.

See paragraph 270.

275. The rates of examination fees which we propose are the same as those charged by the University of Allahabad. We suggest the following rates of remuneration for examiners :—

For setting question papers—

	Rs.	a.
(i) Intermediate arts and science, B. A., and B. Sc. (pass) L. T. ...	50	0 per paper.
(ii) M. A., and M. Sc. (qualifying), LL. B. ...	75	0 „
(iii) LL. M., D. Litt. and D. Sc. ...	100	0 „

For correcting answer papers—

(i) Intermediate arts and science ...	1	0 per paper.
(ii) B. A. and B. Sc. (pass), LL. B., L. T., M. A. and M. Sc. (qualifying) ...	1	8 „
(iii) LL. M. ...	2	8 „

For practical examinations—

(i) Intermediate science ...	2	0 per student.
(ii) B. Sc. pass ...	5	0 „
(iii) B. Sc. (honours) and M. Sc. ...	10	0 „

For oral examinations—

(i) B. A. and B. Sc. (honours), M. A. and M. Sc. ...	5	0 „
(ii) LL. B., L. T. ...	2	0 „

For moderating papers—

Rs. 30 per moderator.

We estimate that the expenditure on examinations involved by these proposals will be more than covered by the fees of candidates.

276. An estimate of the annual income which will accrue to the University from fees of all kinds will be found in Appendix VI.

277. The problem of fees must be considered mainly in relation to the student of humble means. The cost of residence in college for such a student, apart from clothes, books, and other items of personal expenditure, will consist in the fees paid for tuition, accommodation, games and social clubs, and in messing charges. The following table shows the monthly total of these various items :—

	Rs.	a.
Tuition ...	7	8
Accommodation ...	2	0
Games ...	0	6
Club and common room ...	0	6
Messing ...	6	8
Total ...	16	12

The grant of a bursary will reduce these charges to Rs. 12-12-0. For this small sum, poor students will receive better instruction and live under far pleasanter and healthier conditions of life than they have experienced hitherto.

B.—SCHOLARSHIPS.

Recommendations.

278. We recommend that provision should be made for the following Scholarships.
number of scholarships :—

- (i) Forty Junior College scholarships awarded annually on the evidence of attainments as shown in the school leaving certificate, with such supplementary evidence as the University may desire. They should be of the value of Rs. 12 and Rs. 8 per month in the case of students residing in college and out of college respectively, and tenable for two years, corresponding to the period of the Intermediate course. Twenty-two of these scholarships should be tenable in Nagpur, ten in the Robertson College, Jubbulpore, and eight in the King Edward College, Amraoti. Junior college.
- (ii) Twenty-five University scholarships should be awarded annually on the results of the Intermediate examination. They should be of the value of Rs. 15 and Rs. 12 per month in the case of students residing in college and out of college, respectively, and tenable in the University for three years by students taking the honours courses. University.
- (iii) Fifteen Senior College scholarships awarded annually on the results of the Intermediate examination to students who are certified to be unable by poverty, though otherwise qualified, to proceed to the honours courses. They should be of the value of Rs. 12 and Rs. 8 per month in the case of students residing in college and out of college, respectively, and tenable in any college for two years, corresponding to the period of the B. A. and B. Sc. pass courses. Senior college.
- (iv) Eight University scholarships for graduates awarded annually on the results of the B. A. and B. Sc. honours examinations. They should be of the value of Rs. 20 and Rs. 15 per month in the case of students residing in college and out of college, respectively, and tenable in the University for one year, corresponding to the period of the M. A. and M. Sc. courses. Graduates' scholarships.
- (v) Two University scholarships for graduates awarded annually on the result of the B. A. and B. Sc. pass examinations, of the same value as in (iv) and tenable in the University for two years, corresponding to the period of the M. A. and M. Sc. courses for students who have not taken an honours course.
- (vi) Two Prize Fellowships for Research awarded annually on the results of the M. A. and M. Sc. examinations. They should be of the value of Rs. 100 per month and tenable in the University for a maximum period of three years. Prize Fellowships.

279. The above scholarships should be distributed among Arts and Science students in proportion to the number taking Arts and Science courses respectively.

280. Special provision should be made for Muhammadan students as follows :— Exhibitions for Muhammadans.

- (i) Two exhibitions annually awarded on the same conditions as Junior College scholarships.
- (ii) One exhibition annually awarded on the same conditions as Senior College scholarships.

281. Scholars and exhibitioners should be eligible for bursaries. See paragraph 211.

282. An annual sum of Rs. 500 should be allotted for prizes. Prizes.

283. Scholarships, exhibitions and prizes should be awarded by the Syndicate on the recommendation of the Faculties concerned.

Notes.

284. The present allotment of scholarships for Arts and Science Colleges in the Central Provinces is as follows :—

Kind of scholarship.	Number.	Value.	Period of tenure.
		Rs.	
Junior College	18	12 or 8	2 years..
Senior College	11	10 or 15	"
Graduate	1	14 or 20	"
Fellowship for advanced study or research ...	1	60	"

In each case the higher amount of scholarship is given only if a student resides in college. The number of scholarships is 31 and of students 946, giving an average of 1 scholarship to 30 students.

According to the scheme which we propose, the number of scholarships will be 95 and of students 1,700, making 1 scholarship to slightly more than 17 students. The annual expenditure will amount to Rs. 40,300 as compared with Rs. 9,400 at present.

This increase in the number and cost of scholarships is accounted for—

- (a) by the institution of 25 scholarships for honours students,
- (b) by an increase in the number of graduates' scholarships from 2 to 10.

We have already emphasized the vital importance of raising the standard of attainments in the new university. This object can only be attained by inducing the best students of the Province to take the honours and graduate courses, and we consider that the most effective means of attracting them will be a liberal award of scholarships of higher value than those given for the pass courses.

Apart from the increased expenditure involved by the provision of scholarships for honours and graduate courses, the increase in ordinary scholarships for pass students is merely in proportion to the increase in the number of students which we anticipate. It may be added that we have given, in our estimate, the ultimate expenditure on scholarships, based on the total number of students in each year for whom we make provision in our general scheme. In the first few years of the University, the expenditure will be considerably less than this.

See paragraph 278
(ii).

285. Some members of the Committee were of opinion that scholarships should not be awarded to students taking the B. A. and B. Sc. pass courses, on the ground that the needs of poor students are sufficiently provided for by the creation of bursaries, and that scholarships are essentially intended for the more advanced courses of study. Among other reasons which induced the committee to agree to the continuance of Senior College scholarships was the fact that the external colleges will provide courses of instruction only for the pass degrees.

See paragraph 280.

286. No special provision is made at present for scholarships for Muhammadan students. But we have noted that the number of students attending the colleges of the Province is small, and few of them ever appear in the scholarship list. We consider that special facilities should be created for Muhammadans in the shape of a small number of exhibitions. As soon, however, as Muhammadans are adequately represented in the list of scholars, these special facilities will no longer be required and should be withdrawn.

287. It will be noted that we propose higher rates of scholarships for resident than for non-resident scholars. This is only fair in consideration of the greater expenditure which resident scholars will incur. It is also in accordance with existing practice.

CHAPTER XIV.

SITES AND BUILDINGS.

A.—THE UNIVERSITY AND COLLEGES IN NAGPUR.

Recommendations.

288. The University and college buildings in Nagpur should be concentrated on a site, occupying about 1,100 acres, near Indora village on the north of the Kamptee road. Site. See paragraph 28.

289. The University building should contain the following accommodation :— The university building.

- (i) a Convocation Hall of dimensions suitable for examinations and ceremonial purposes ;
- (ii) 2 large rooms for meetings of the Senate, the Syndicate, the Faculties and the various Boards and Committees appointed by the Syndicate ; Senate and Syndicate rooms.
- (iii) a room for the Vice-Chancellor ; Offices.
- (iv) a room for the Registrar ;
- (v) rooms for clerical and general purposes ;
- (vi) 2 large lecture-rooms, each for 150 students ; Law department. See paragraph 27.
- (vii) 4 class-rooms, each for 25 students ;
- (viii) a common-room for the law teachers ;
- (ix) a room for the University Professor of Law ;
- (x) a common-room for the law students ;
- (xi) laboratories, lecture-rooms, and research rooms for Physics, Chemistry, Botany and Zoology ; Science department.
- (xii) 12 rooms for class and research work ; Seminars. See paragraph 119.
- (xiii) 8 private rooms for the university professors ;
- (xiv) Library rooms (see paragraph 240) ; Library.
- (xv) a large room for Art collections ; Art museum. See paragraph 246.
- (xvi) a room for the Warden ; Non-collegiate institution. See paragraph 222.
- (xvii) a room for the Warden's clerical staff ;
- (xviii) a common-room for the non-collegiate students.

290. Each of the three college buildings should contain—

- (i) a hall for examinations and lectures ;
- (ii) 25 class-rooms, each for 20 students ; College buildings. See paragraph 68.
- (iii) a library and reading-room ; See paragraph 48.
- (iv) a room for the Principal, and an ante-room for visitors ;
- (v) a common-room for the teaching staff ;
- (vi) an office and record-room ;
- (vii) a cloak-room and cycle-room ;
- (viii) 126 single rooms for students ;
- (ix) 69 rooms, each for four students ;
- (x) 2 sets of quarters for married preceptors in the Senior Collegiate service (see paragraph 215) ;
- (xi) 2 sets of quarters for married preceptors in the Junior Collegiate service (see paragraph 215) ;

- (xii) 4 common-rooms, each for 100 students ;
- (xiii) 4 sick-rooms ;
- (xiv) dining-rooms, kitchens, store-rooms, fuel-rooms for nine messes.

Gymnasium. 291. For the gymnasium, see paragraph 238.

Hospital and dispensary. See paragraph 214. 292. There should be a small dispensary, a hospital for 16 in-door patients, and quarters for the medical staff.

Students' union and pavilion. See paragraph 256. 293. The Students' Union should be situated on one side of the University athletic ground, and should contain two large rooms for reading and social purposes, two small rooms for athletic equipment, and a small refreshment room.

Staff club. See paragraph 257. 294. The Staff Club building should be on the opposite side of the athletic ground, and should contain a reading-room, a billiard-room, and arrangements for light refreshments. On each side of the building should be two tennis courts.

Playing fields. See paragraph 258. 295. The University athletic ground should comprise a cricket field, a football and hockey field, and a running track.

296. The playing fields of each college should include a hockey ground, a football ground and a cricket ground, and a small pavilion should be provided for each college, containing a store-room for athletic equipment and a dressing-room.

Tennis courts. 297. Five tennis courts should be built for each college, and four for the non-collegiate institution.

Residences for the teaching and superior administrative staff. 298. The residential accommodation for the staff should include—

- (i) Three houses for the Principals of the three colleges.
- (ii) Fifteen houses for members of the staff of Indian Educational service status.
- (iii) 32 houses for members of the staff of Senior Collegiate service status.
- (iv) 33 houses for members of the staff of Junior Collegiate service status.

Houses for the subordinate and clerical staff. 299. Houses should be provided for 40 members of the subordinate and clerical staff.

Quarters for servants. 300. Quarters should be built for 198 servants of the university and colleges.

Drainage system. 301. An underground drainage system should be constructed for the university and college buildings, and for the residential quarters of the superior administrative and teaching staff.

Electric Lights, etc. 302. Electric lights and fans should be installed in the university and college buildings, and in the residences of the staff.

303. The Public Works Department should be responsible for the maintenance of the buildings, the drainage system, the water-supply and the roads.

Notes.

304. Illustrations of the site and building plans will be found in a separate appendix. A reference to illustration No. 1 will show the location of the University with reference to the city and the civil station of Nagpur. In illustrations Nos. 2 to 13 will be found a general plan of the University (No. 2), and plans of

the main university building (Nos. 3 and 4), the college buildings (Nos. 5 and 6), the gymnasium (Nos. 7 and 8), the students' union (Nos. 9 and 10), the staff club (No. 11), the hospital (No. 12), and the dispensary (No. 13). It will be seen from the site plan that the buildings are extended over a considerable area. This is due to the difficulty of obtaining suitable foundations in the low-lying portions of the site. We have asked for a generous allotment of land with a view to securing the University from the danger of being absorbed in any town extension scheme.

305. We feel that the building plans are capable of considerable modification, and it is necessary to point out that they were prepared mainly for the purpose of enabling us to frame an estimate of the capital expenditure, and not as an indication of the ultimate form which the university buildings should take. We assume that they will be carefully revised by the Consulting Architect whose services, we understand, are about to be placed at the disposal of the Local Administration, and we recommend that a committee shall be appointed to elaborate instructions to the architect in regard to the educational requirements of the buildings. For example, one point in particular will require most careful attention, namely, the provision of a northern light for the laboratories.

306. We have already alluded to the desirability of providing members of the Indian Educational service employed by the University with more commodious houses than are assigned to them under existing rules. We recommend that the residences of Principals of colleges and other members of the Indian Educational service shall be such as are built for officers drawing an average pay of Rs. 1,500 and Rs. 1,065, respectively. The same accommodation should be provided for teachers of corresponding status on the staff of the Hislop College. See paragraph 216.

307. A report on the water-supply and sewerage system of the University will be found in Appendix IX. See paragraph 302.

308. Electric lights and fans will be provided in the lecture-rooms, laboratories and class-rooms, but only lights in the living rooms of the students. We have ascertained that the Nagpur Electric Light and Power Company will be prepared to extend their plant and mains so as to provide current for the University. See paragraph 216

309. An estimate of the capital expenditure on buildings and equipment will be found in Appendix VII.

B.—THE KING EDWARD COLLEGE, AMRAOTI.

Recommendations.

310. The King Edward College should provide residential accommodation for 300, and class-room accommodation for 400, students, and should contain a hall, library, and rooms for the Principal, teaching and clerical staff, etc., on the same scale as in the colleges in Nagpur. See paragraph 68.

311. Accommodation should be provided for instruction in Physics and Chemistry up to the Intermediate standard. See paragraph 65 (c).

312. A small gymnasium should also be provided. See paragraph 238.

313. The following residential accommodation should be provided for the Teaching Staff:—

- (i) a house for the Principal of the college on the same scale as the houses of Principals of the Nagpur colleges (see paragraph 306);
- (ii) houses for two members of the Indian Educational service on the same scale as recommended in paragraph 306;
- (iii) houses for nine members of the Senior Collegiate service;
- (iv) houses for seven members of the Junior Collegiate service.

314. Quarters in college should be provided for four preceptors, as recommended in paragraph 215.

315. There should be a dispensary, and quarters for an assistant surgeon, a compounder, three clerks and thirty-two servants.

316. The college should be provided with equipment on the same scale as the colleges in Nagpur.

Note.

317. The question of the site and plans of the Amraoti College buildings has been for some time under the separate consideration of the Education Department. We understand that representative local opinion is being obtained regarding the most suitable kind of building. We submit no definite plans or detailed estimates for these buildings, but assume that the recommendations made above, in regard to the kind of accommodation required, will receive due consideration.

318. An estimate of the capital expenditure on the buildings and equipment of this college, based on the estimates for the Nagpur colleges, will be found in Appendix VII.

C.—ROBERTSON COLLEGE, JUBBULPORE.

Recommendations.

See paragraph 14. 319. The following additional buildings will be required by the Robertson College, in view of the increase in the number of students which is contemplated under the general university scheme (see paragraphs 12 and 68):—

- (i) two hostels, each for 50 students;
- (ii) one house for an additional Indian Educational service officer, on the scale recommended in paragraph 306;
- (iii) 5 houses for members of the Senior Collegiate service;
- (iv) 9 houses for members of the Junior Collegiate service;
- (v) a gymnasium.

320. Additional furniture and equipment should also be provided.

Note.

321. An estimate of the capital expenditure on buildings and equipment will be found in Appendix VII. This includes the estimate sanctioned for buildings already under construction.

CHAPTER XV.

FINANCIAL ESTIMATE.

Capital Expenditure.

322. The gross capital expenditure involved by our scheme (see Appendix VII) may be summarised as follows:—

A.—*The University and the Colleges in Nagpur—*

	Rs.
Land acquisition (approximate estimate) ...	2,50,000
Buildings ..	57,57,936
Furniture ...	1,50,000
Equipment ...	4,17,890
Grounds and playing fields ...	63,500
Water, drainage, electric supply ...	6,01,888
Miscellaneous ...	1,17,966
Total ...	<u>73,64,180</u>

B.—*The Robertson College, Jubbulpore*—

			Rs.
Land acquisition	...	...	14,000
Buildings	...	...	8,62,299
Grounds and playing fields	...	...	37,000
Furniture and equipment	...	...	65,700
Water-supply, drainage, electric supply	...	...	1,25,000
			<hr/>
Total	...	...	11,03,999
			<hr/>

C.—*The King Edward College, Amraoti*—

Land acquisition	...	...	25,820
Buildings	...	...	10,37,012
Furniture and equipment	...	...	86,960
Grounds and playing fields	...	...	33,000
Water-supply, drainage, electric supply	...	...	1,25,000
			<hr/>
Total	...	...	13,07,792
			<hr/>

Total gross capital expenditure ... 97,75,971

323. The following items may be set off against this expenditure:—

- (i) Sanctioned cost of buildings for the Robertson College, Jubbulpore. This expenditure would be incurred whether the University came into existence or not (see paragraph 14) ... 7,23,430
- (ii) King Edward Memorial Fund, Berar, to be utilized for constructing buildings for the college at Amraoti .. 2,00,000
- (iii) Saving to Government resulting from the use of the present Jubbulpore College buildings for other educational purposes.
- (iv) Saving to Government from the use of the present Morris College buildings for the Patwardhan High School.
- (v) Rent of residential quarters provided for the staff of the University and the colleges.

324. The land acquisition estimate for the University and the Colleges in Nagpur was prepared by the Deputy Commissioner, Nagpur. The figures for buildings, grounds and playing fields, water-supply, drainage, electric supply, etc., have been furnished by the Public Works Department. The estimates for furniture and equipment were framed by various sub-committees.

325. As regards the Robertson College, Jubbulpore, the estimates for land acquisition, grounds, playing fields, and water-supply, and for the greater portion of the buildings have been already sanctioned. The Public Works Department supplied the estimate for electric supply. We consulted various sub-committees with regard to the cost of furniture and equipment.

326. The figures for the King Edward College, Amraoti, are based on the estimates for the colleges in Nagpur and Jubbulpore.

327. It may be added that, in the above estimate of expenditure on the University and the Nagpur colleges, provision is made for the Hislop College on exactly the same scale as for the other two colleges.

Recurring Expenditure.

328. The estimate of gross recurring expenditure (see Appendix VIII) consists of the following main items :—

A.—The University and the Incorporated Colleges in Nagpur—

			Rs.
University administrative staff	..	...	50,004
Teaching staff	...	...	5,40,480
Clerical establishment	...	...	22,452
Miscellaneous subordinate establishment	...	...	4,956
Menial establishment	...	...	17,988
Contingencies	...	...	2,25,721
			<hr/>
Total	...	...	8,61,601
			<hr/>

B.—The Robertson College, Jabulpore—

Teaching staff	...	...	1,38,444
Subordinate staff	...	...	3,264
Medical staff	...	...	2,796
Menial staff	...	...	5,928
Contingencies	...	...	17,350
			<hr/>
Total	...	...	1,67,782
			<hr/>

C.—The King Edward College, Amraoti—

Teaching staff	...	...	1,13,448
Subordinate staff	...	...	2,064
Medical staff	...	...	2,796
Menial staff	...	...	4,164
Contingencies	...	...	20,000
			<hr/>
Total	...	...	1,42,472
			<hr/>

*Total gross recurring expenditure ... 11,71,855

329. The following items may be set off against this gross expenditure :—

			Rs.
(i) Receipts of the university	...	...	1,78,360
(ii) Sanctioned expenditure on the Jabulpore College for the ensuing year	...	...	67,500
(iii) Estimated expenditure on the Morris College for the ensuing year	...	...	60,000
(iv) Present cost of scholarships	...	...	9,400
			<hr/>
Total	...	...	3,15,260
			<hr/>
Gross expenditure	...	...	11,71,855
Deductions	...	...	3,15,260
			<hr/>
Net recurring expenditure	...	...	8,56,595
			<hr/>

*This includes Rs. 1,42,020 and Rs. 96,000 on account of pension contributions and maintenance charges for buildings, respectively. We had some doubt with regard to the propriety of including these items. The former we have added in accordance with the advice of the Comptroller. Neither of these items is usually included in estimates of the recurring charges of new institutions financed by Government.

330. The entries in Appendix VIII, under the heads Administrative and Teaching staff, summarize in tabular form the proposals made in previous chapters.

331. The estimate for clerical establishment (which, in the case of the external colleges, is entered under the head of subordinate staff) includes the following clerks :—

(i) *Registrar's office—*

		Rs.
Superintendent	...	200—300
Finance clerk	...	100—150
Examination clerk	...	100
General disposal clerk	...	75
Assistant to finance clerk	...	75
Assistant to examination clerk	...	75
Assistant to general disposal clerk	...	50
Typist and shorthand clerk	...	50
Despatcher	...	30

(ii) *Warden's office—*

Confidential clerk	...	75
Assistant clerk	...	30

(iii) *Office of the Director of physical education—*

Head clerk	...	75
Assistant clerk	...	30

(iv) *Office of the Librarian—*

Head clerk	...	75—100
Assistant clerk	...	50

(v) *Science department—*

Head clerk	...	75
Assistant clerk	...	50
Do.	...	30

(vi) *Law department—*

Clerk	...	30
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(vii) *Each incorporated college*—*

Head clerk	...	75
Library clerk	...	50
Assistant clerk	...	30

332. The estimate of the miscellaneous subordinate establishment of the University includes mechanics and laboratory attendants for the laboratories, the subordinate medical staff and the head gardener who will be in charge of the University grounds.

333. In the estimates of menial establishment we have provided for chowkidars, chaprassis, bearers, farrashes, malis and sweepers for the University and the four Incorporated Colleges, and for general servants and cooks for the residential quarters attached to the colleges. The wages of all hostel servants are at present paid out of college funds, and we consider that this system should be continued in the new University.

* The Robertson College, Jubbulpore, is provided with an extra clerk on Rs. 40 who will also act as Curator of the laboratories.

334. The estimates of contingencies are based on the reports of various sub-committees. The allotment for the University library includes Rs. 1,000 for law books, Rs. 3,000 for scientific works, Rs. 8,000 for works of general culture, and Rs. 1,500 for periodicals. We recommend that the Craddock and King Edward Colleges shall receive an annual grant of Rs. 1,000 for books, and that the same sum shall be devoted to expenditure on the library of the Robertson College, Jubbulpore, while the allotment for that purpose to the Morris College should not exceed Rs. 500. The two first colleges, in the first few years of their existence, will naturally require considerably larger grants than the Morris College, which has been adding to its library for some years. We consider that the Robertson College should have a larger grant than the Morris College, because it will not have access, like the latter, to the University library.

The financial position of the Hislop College.

335. It will be observed that we have included capital expenditure on the Hislop College in our estimate, but have made no reference to the recurring expenditure of that college, or to the Government grant which will be necessary for its maintenance. It is impossible for us to determine, with any degree of accuracy, the recurring expenditure that will be necessary for the maintenance of the college in accordance with the requirements of the proposed university, and we have, therefore, excluded it from our estimate. But we have included figures relating to the college in our estimate of capital expenditure, because we are in a position to make an accurate forecast of such expenditure, which we assume will be similar to that which will be incurred on account of the incorporated colleges in Nagpur.

336. It would not be proper for us to recommend what portion of the recurring and non-recurring expenditure should be borne by the college authorities, and what portion by Government. With regard to the recurring expenditure, it is obvious that a substantial increase in the present grant for this purpose will be necessary, in view of the large increase in expenditure that will be incurred by the college, if it is to fulfil the very important functions which we assign to it as a constituent college of the University. As regards both recurring and non-recurring expenditure, we are confident that Government will deal generously with an institution which has been one of the pioneers of collegiate education in these Provinces, and has won for itself a firm place in the affection and esteem of the people. We are equally confident that the Mission authorities will worthily maintain the high ideals which have always animated their work in this country, and will not fail to respond to the demands which the progress of university education is bound to make upon them.

ARTHUR MAYHEW.
C. E. LOW.
B. K. BOSE.
R. N. MUDHOLKAR.
M. R. DIXIT.
R. M. SPENCE.
A. C. SELLS.
C. E. W. JONES.
N. G. BOSE.
M. OWEN.
R. P. DVIVEDI.
ABDUL QADIR.
NIZAM-UD-DIN AHMED.

In so far as I represent the Hislop College authorities, I sign this report with the proviso that the right of the Foreign Missions Committee of the United Free Church of Scotland to accept or reject the scheme in its final form is reserved, and that, if they accept it, it can only be on condition that they receive sufficient financial aid from Government, as already explained in detail to the Director of Public Instruction.

A. ROBERTSON.

Minutes by Members of the Committee.

I.—The Hon'ble Rao Bahadur R. N. Mudholkar.

I am unable to accept the view of the majority of the Committee in regard to the composition of the Senate and the proposal to give "a predominant voice" to the members of the teaching staff, as advocated in paragraph 26 of the Report. In Chapter VIII it is recommended that, out of a total number of 75, the Senate should have on it 38 members from amongst the teaching staff of the University and Colleges. This recommendation gives to the teaching element a much greater representation and far higher power than is given by the Indian Universities Act of 1904. That Act was passed to give effect to the recommendations of a Committee which forcibly urged the opinions of educationists, and reflected the views of a powerful Viceroy who was also a great advocate of University efficiency. Special provisions were introduced in that enactment, in response to the demand for giving an effective and really controlling voice to the persons who were following the profession of education; and it represented at the time the high water mark of the claims of the profession. It was recognised by the Legislature and the Government that, while the special claims of the persons directly engaged in the work of University education to special treatment deserved acceptance, there were considerations which had to be equally borne in mind, the interests of general administration, the condition and capacity of the country, the entirety of the needs and demands of the people, their circumstances and their strength. In view of all these considerations, it was agreed that it would be sufficient if the teaching element constituted two-fifths of the Senate. Under this principle, the number of members of the teaching profession on the Senate of the proposed Central Provinces University would be only 30, whereas according to the recommendation made in the Report it would be 38, that is, more than half the total number of the Senate. In the first place, I do not think that it would be safe to give an absolute majority to any one of the different constituent elements of the University. It means that even if any particular proposal is deemed unjustifiable or unsafe by all the other official and non-official members, that is, by the people, the Government and its officers coming from different departments, it would be in the power of the teaching element to carry it out. It was stated in the course of discussion in the Committee that it would be unlikely that the teaching element, consisting, as it would, mainly of persons in the service of Government, would *en masse* go against the Head of the Administration and the official members. This is an argument which cuts both ways, and can be effectively met by the enquiry whether it is likely that all the officers of the Government or the majority of them would vote against any responsible proposal emanating from a body the majority of whom are their brother officers. Supposing that the educationists had 30 and the non-officials (elected and nominated) were 30, and the *ex-officio* members and nominated officials 15, it would be impossible for the non-officials to carry any proposition against which the educationists took up a strong attitude, unless the majority of the official members made common cause with them.

Secondly, as a non-official who has, all through his life, taken a great interest in education and whose faith in the beneficent influences of knowledge is second to none, I am not prepared to admit that the teaching profession has a monopoly of educational zeal, and that there would be stagnation and a block to progress unless things are left in the hands of this latter class. The history of Oxford and Cambridge itself shows the incorrectness of this assumption. And yet it is this assumption which underlies the position taken up in the Report.

Thirdly, the majority of the questions with which the Senate of a University has to deal have to be examined not merely from a teacher's standpoint, but also from that of the parent, of the ordinary citizen, of the enlightened and far seeing administrator. The purely educational mind will not supply all these different points of view: nor am I sure that it would be ready to accept correctives, if it is secure in the possession of an absolutely controlling power.

Fourthly, the persons who are most interested in our University would be the residents of these Provinces, and it would be only meet and proper that the

representatives of the people (elected and nominated) should, like the educationists, constitute two-fifths of the Senate.

I therefore consider that the proportion of the different elements should be— one-fifth, *ex-officio* and official members (other than teachers); two-fifths, members of the teaching staff of the University and Colleges; one-fifth, elected by graduates; and one-fifth, non-officials nominated by the Chief Commissioner.

The constitution of the Syndicate also is open to the objection that it goes much further than the Indian Universities Act of 1904 in centering all power in the teaching element. While, under the Act, "a number not falling short by more than one of a majority of the elected members of the Syndicate shall be Heads of or Professors in affiliated Colleges", the constitution proposed in the Report would have a minimum of 8 out of 13 from amongst such educationists. The arguments I have urged above in regard to the constitution of the Senate apply even more strongly in the case of the Syndicate. The body in whom the Executive Government of the University is vested ought to have a preponderating element of persons, who combine scholarship with close and almost daily acquaintance with the practical affairs of the world, which latter qualification is, it must be plainly stated, not conspicuously seen amongst Professors. Another defect in the constitution of the Syndicate is the very meagre representation of non-officials. Excepting the Vice-Chancellor, there is scope for the appointment of three non-educationists. Government would naturally enough have one official, and at the utmost there would be only two places open to non-officials.

Another point on which I am unable to agree with the recommendation of the majority is the question of the age-limit for admission to the University. With the educational test that is to be insisted upon and the guarantee as to steadiness, industry, perseverance, abilities and good character, which the possession of a School Leaving Certificate would afford, there is no need to impose a further restriction of age. In the majority of cases, the students would be above 16 years. But there would be cases,—and these would be of brilliant boys whose entry into its portals should be facilitated by the University,—who would be seriously affected by this age-limit, as they are likely to be deprived of all education in a public institution at a time when steady application and a life of discipline are absolutely necessary to keep impressionable youths out of the reach of harm. I know of several cases where a boy below the age of 16 was able to complete the entire High School course, maintaining a high place in his class all the time. Such a boy, howsoever fit he might be otherwise, would not be admitted into the University, while according to the existing regulations he would have to be presented for the School Leaving Examination at the completion of the course (*ex hypothesi* when he was below 16), and would, on his passing the examination, be told to leave the school. There would be all sorts of hard cases. A promising and really qualified boy with an ambition to go to England, after completing the University course here, may at the date of examination be wanting only a month or a few days to complete his 16th year. He will not be allowed to appear, and will be either unnecessarily kept back in the same class, going over the same books and subjects again, or told to go out of school and thus be exposed to the danger of losing his habits of study and application; and all this for the sake of an arbitrary limit which can find little in reason to recommend it. I cannot accept the argument that such an age-limit exists in the Allahabad University, and that all the Universities have accepted the principle of an age-limit. To this there are two replies. One, and that is a very effective one, is that in the University of the Province which is educationally the most advanced in India, *viz.*, Bengal, the age-limit is 15—a limit which greatly circumscribes the creation of hardship. The other reply is that, when the age-limit was imposed in 1904-05, there had not grown up the new practice of turning a boy out of school when he has passed the highest standard taught in the school.

I consider the imposition of the age-limit as utterly uncalled for, and strongly urge that none should be laid down. But in case the Government are not prepared to go so far, I would most earnestly say that the limit ought not to be above 15.

R. N. MUDHOLKAR.

II.—The Hon'ble Mr. M. R. Dixit

While agreeing with the Committee that the recommendations suggested will mark an epoch in the improvement of higher education in our Provinces, I am unable to agree with some of the recommendations of the Committee, and, since some of these points are of considerable importance, I feel it my duty to place separately on record the opinion at which I have arrived, and which, I believe, is shared by the great majority of my friends.

I.—CONSTITUTION.

(a) *The Senate.*

The first point on which there is this difference is as regards the constitution of the Senate, the Syndicate and the Faculties or Boards of Studies.

As regards the composition of the Senate, I find that the non-official element will be in a minority, so as to dissociate them for all practical purposes from the government of the University and to put all directive and administrative power into the hands of Professors or teachers, who, by the way, would be mostly Government servants. Lord Curzon has said that the ideal that the Government looks up to is one of all self-governing institutions watched parentally by Government in the background. Besides, the highest purpose of British rule in India is not merely to govern the country sympathetically, but also to associate slowly and steadily the people of the country with the work of the Administration.

There is no doubt whatever, that under the constitution as suggested by the Committee, the number of non-official Indian members would be very small. From my point of view, the disparity does not lie in the percentage of the elected to the non-elected but in that of the official to the non-official. I fully desire that high education must not be left entirely to the control of the people till it is further nurtured and developed by Government. But there enter into educational administrative questions, questions of public policy and expression of public demands which can only be conveyed and expressed by representative non-officials. Of course, the gentlemen engaged in the teaching profession should have a large voice in the deliberations of the University, and it is with this view that the Legislature has decided that 40 per cent of the members of the Senate should be actually engaged in the profession of teaching. But with these must be associated, almost on equal terms, representatives of the people, whether elected or nominated. It has been rightly remarked that whatever agitates the adult world penetrates the realm of education and instruction, nay, it must penetrate it or education becomes antiquated and fossilized, and this penetration should be not direct and immediate, but indirect and after a certain interval of time. The ideas of the adult world must be subjected to a process of filtration before entering the realm of education. This can only be done if an adequate element of non-official Indians is put on the deliberative body of the Senate. It is the adequate representation of the Indian non-official element which places the governing body in touch with the people and makes that body thoroughly acquainted with the requirements and needs of the Indian student. A mere comparison of the constitutions of the existing Universities with that of our projected University will show at a glance that our University looks more like a department of State. The constitution I suggest is that, since the Indian Universities Act makes it incumbent that two-fifths must be teachers, and since the public at large have an equal if not greater interest in the turning out of their children as useful members of society and good citizens of the State, the composition of the Senate should be roughly two-fifths representatives of the people whether elected, selected or nominated, two-fifths men engaged in the teaching profession, and one-fifth official members of Government, whether *ex-officio* or otherwise.

What I assert is that it is beyond the bounds of probability that the representatives of the people will be so obstinate as to clannishly defeat any reasonable suggestions which the educational experts may bring forward in the Senate. In these extraordinary cases of divergent interests and classes, I certainly concede that the control and stimulus of some central power are imperative, and this

power must necessarily be the Government for the purposes of restoring the balance of power and interest from time to time, and also of holding the balance even between the experts and the laymen, who are both vitally interested in the problems of the University. An objection has been somewhat indirectly advanced, and that is you cannot have non-officials interfering to any appreciable extent in a concern which Government is financing. To this I need not attempt a reply except the bare statement that co-operation is now the accepted policy of Government, and feel convinced that the people have done nothing to justify the Government withdrawing from that policy.

(b) *The Syndicate.*

The remarks made above in regard to the Senate apply equally to the constitution of the Syndicate, where only 2 out of 13 will be non-officials. This non-admission of the Indian non-officials to this extent into the secret chambers of the Syndicate argues a certain amount of distrust in the educated classes. In this matter our University will mark a step backward. In fact as well as in principle, the teaching staff and the non-officials should have an equal number with Government officials to watch and hold the scales even.

(c) *The Deans of the Faculties.*

The constitution of the Faculties also is on slightly novel lines. The Deans are usually elected in the sister Universities, but here again we have nomination, pure and simple. True that the principle of election is in bad odour, but, after all, no serious defects have yet been traced to this system of election, and no case, I think, has been made out for the Committee's recommendation reversing the practice in vogue. So much for the part dealing with the constitution.

II.—THE NON-COLLEGIATE INSTITUTION.

The second substantial point on which I am compelled to differ is the institution of the "Non-Collegiate" students. This word was introduced in the discussion, preliminary to the appointment of this Committee, by me in the ordinary connotation of the term as accepted in the English Universities. The institution of "Non-Collegiate" at Oxford and Cambridge was due to the suggestion of Mark Pattison who agreed with the then popular complaint against the Universities that neither the education, the endowments, nor the social advantages were sufficiently open to the man of humble means. It was with a view to throwing open the portals of the University to the poor classes that the Universities Commission recommended its institution. And the result has been that educational experts of the calibre of Lord Curzon have remarked "that the opportunities that this system affords in providing an economical education for the poor are manifold" and that "the system now fills a definite and exceedingly useful place in the organization of Oxford life and teaching." It was only from the point of view of the poorer class of students that the educated people in the Province were not quite enamoured of an ideal residential University. It was, indeed, in this sense that the term was used here, and now I find that the term "Non-Collegiate" is only to be applied to students who reside with their parents or *bond fide* guardians approved by the University. No one ever asked for concessions for this class of students at all. It is, besides, totally unlike its namesake at Oxford and Cambridge. The non-inclusion of the "Non-Collegiate" institution—properly and technically so called—would leave our University at the stage at which Oxford and Cambridge started with all the defects intact. What is required in a backward Province like ours is as wide a diffusion of education as possible and not its contraction on the ground of efficiency. I am fully aware that our Committee has recommended a system of bursaries. But these bursaries leave out of account a considerable number of students who gain their livelihood by legitimate means and also continue their studies by the money they get either by tuition or by charity. To this class, bursaries to the extent of four rupees cannot afford any great assistance. I have strong hopes that the Administration would insist on the creation of a "Non-Collegiate" institution in our University; for it is as much the function of the University to provide teaching as it is its duty to offer this teaching to the widest range of students.

III.—THE LAW COURSE.

The next recommendation on which I have to differ is that the Law Course should be one of three years. While admitting the defects mentioned in paragraph 122 of the Report, I may be pardoned if I say, on good authority, that the fault is not all on one side. "Viewing it as an outsider while retaining a sympathetic comprehension of the difficulties of a teacher, I must say that there is waste of time and energy in the ordinary instruction. There is perhaps no lack of industry, devotion or enthusiasm, but somehow there is too much 'lost motion' in the process. It would be well if the teachers did not know quite so much, if they knew how to tell, what they did know, better. It is a principle of hydraulics that the flow of water depends on the character of the outlet and head, and not at all on the amount of water." In many cases it has seemed to me that the instructor comes into the lecture-room without the slightest idea how he is to present his subject. He rambles on in a more or less interesting and instructive manner, but without any apparent regard to the effect on his audience or the economy of their attention. The power of the spoken word depends unfortunately upon him who speaks it. A simple glance at the professional standing of the various lecturers in Law in the Calcutta University will make the observant wonder how it is that there are so many successful candidates in spite of the unsympathetic atmosphere that permeates a Law College. But with a whole-time Law Staff and additional tutorial instruction, I feel confident that a systematic study of Law would be feasible in two years' time. No case has been made out at all for a three years' course. Besides it is practice alone that can make a lawyer perfect. No amount of class-room or tutorial instruction can ever achieve what practice alone can teach. And the further fact cannot be ignored that, unlike the English Universities, we shall only admit a graduate to the Law course, evidently after he had acquired good and careful habits of study.

IV.—THE MINIMUM AGE FOR MATRICULATION.

The question of the minimum age-limit of 16 years for admission is again a point on which there is divergence of opinion. It is impossible to predict how it will prejudicially affect the chances of Indian students for the *service-de-luxe*, the Indian Civil Service, since the recommendations of the Public Services Commission are not yet made. Besides one fails to see how by preventing a youth from going up for his examination on the ground of age, he will improve in either his health or studies. A break at this juncture of his life is likely to be as harmful as a break at the end of his educational career is likely to be helpful. I, for one, would desire, nay insist on, satisfying myself that the candidate is educationally fit to undergo Collegiate instruction, without the enquiry about the age. A European standard can really bear no comparison, since Orientals are precocious.

V.—PHYSICAL EDUCATION.

There is just one point with regard to the Director of Physical Education and his staff which I cannot pass over. From the proceedings in the Committee, I gathered that it was left to the University to decide. The point that should be made clear is that no exclusive right to treat the students is vested in this Department. It is not a liability attaching to the students that they must get treated by the Director or his staff. At Oxford and Cambridge, the students are at perfect liberty to get treated by any doctor that they like. But in India instances have come to my knowledge where a consulting doctor in charge of a hostel is allowed the right to claim the monopoly, and the student deprived of any other medical assistance, although willing to pay for the same. It is well recognised that the efficacy of medicinal doses is intensified a great deal by the faith which the patient has in the particular medical practitioner. Besides, this idea of the creation of this Department is more or less experimental. It has not been tried in any Indian University, nor, I believe, in any English University. We are dependent largely on the American Universities system. Under these circumstances, it would be eminently desirable to make the position clear, *viz.*, that it is the right, and not the liability, of the students to get treated and attended to by the Director and his staff.

M. R. DIXIT,

III.—Khan Sahib Moulvi Abdul Qadir.

I disagree with the view of the majority of the Committee in regard to the age-limit of 16, because it would be a very limited number of students of extraordinary intelligence that would be entering the gates of the University before the above age-limit, and it would be very hard on them to handicap them by imposing this condition and thereby debarring them from receiving University education, merely because they are not 16 years of age. I, therefore, am in favour of no age-limit at all.

In regard to a supplementary Matriculation Examination to be held in special subjects in case it is considered necessary by the University, I disagree with the opinion of the majority, because the School Leaving Certificate will be awarded not only upon the result of a single examination, but will be based also upon the record of a candidate's school career. Besides, the University will also have its proper share of responsibility in awarding the certificate by having adequate representation on the Board to regulate the conditions of awarding it. Under the above circumstances, I see no necessity of having any further supplementary examination in any subject and overburdening the students thereby, especially when the Committee wants to lessen the burden of examinations by doing away with the Matriculation Examination itself.

I am also against the view taken by the majority of the Committee in allowing the teaching element to have an absolute majority in the Senate and the Syndicate of the University, because such a state of things absolutely excludes for ever the chance of the non-official element having its voice heard in any question that may at times crop up against the teaching element itself.

ABDUL QADIR.



APPENDICES.



APPENDIX I.

List of Sub-Committees.

1. *English*—

The Hon'ble Mr. A. I. Mayhew.
 Mr. A. C. Sells.
 Revd. J. F. McFadyan, M.A. (Glasgow), Professor, Hislop College,
 Nagpur.
 Mr. J. Bremner, M.A. (Aberdeen), Professor, Hislop College,
 Nagpur.
 Mr. C. E. W. Jones.

2. *Philosophy*—

The Hon'ble Mr. A. I. Mayhew.
 Mr. J. Bremner.
 Mr. W. S. Rowlands, B.A. (Oxon.), Professor, Government College,
 Jubbulpore.
 Mr. S. C. Roy, M.A. (Calcutta), Professor, Morris College, Nagpur.

3. *History*—

Mr. C. E. W. Jones.
 Mr. F. P. Tostevin, B.A. (Oxon.), Officiating Principal, Morris
 College, Nagpur.
 Revd. T. W. Gardiner, M.A. (Cantab.), Professor, Hislop College,
 Nagpur.
 Mr. B. K. Watchmaker, M.A. (Bombay), Professor, Government
 College, Jubbulpore.

4. *Economics*—

The Hon'ble Mr. C. E. Low.
 Revd. J. F. McFadyan.
 Mr. C. E. W. Jones.

5. *Sanskrit*—

Pandit Kesho Ganesh Tamhan, M.A. (Calcutta), Professor, Morris
 College, Nagpur.
 Rai Bahadur Pandit Sadashiva Jairam Dehadrai, M.A. (Calcutta),
 Professor, Government College, Jubbulpore.
 Mr. D. D. Jattar, M.A. (Allahabad), Professor, Hislop College,
 Nagpur.
 Rampratap Shastri (Punjab), Lecturer, Morris College, Nagpur.

6. *Arabic and Persian*—

Khan Bahadur Nizam-ud-din Ahmad.
 Khan Sahib Moulvi Abdul Qadir.
 Shams-ul-ulama Muhammad Amin, Jubbulpore.
 Mr. Dwarka Prasad, B.A. (Calcutta), Professor, Government
 College, Jubbulpore.
 Mr. A. Ahmad, M.A. (Allahabad), Professor, Hislop College,
 Nagpur.

7. *Mathematics*—

Mr. M. Owen.
 Mr. S. P. Banerjee, M.A. (Calcutta), Professor, Morris College,
 Nagpur.
 Mr. G. K. Garde, B.A. (Allahabad), Professor, Hislop College,
 Nagpur.
 Mr. T. V. Mone, M.A. (Bombay), Professor, Government College,
 Jubbulpore.

8. *Science—*

Revd. A. Robertson.
 Mr. R. H. Beckett, B.Sc. (London), Inspector, European Schools,
 Central Provinces.
 Mr. M. Owen.
 Mr. S. P. Banerjee.
 Mr. C. E. W. Jones.

9. *Physics and Chemistry—*

Revd. A. Robertson.
 Mr. R. H. Beckett.
 Mr. M. Owen.
 Mr. M. L. De, M.A. (Calcutta), Assistant Professor, Victoria
 College of Science, Nagpur.

10. *Biology—*

Revd. A. Robertson.
 Major P. F. Chapman, M.B., C.M. (Edin.), I.M.S., Civil Surgeon,
 Nagpur.
 Mr. R. J. D. Graham, M.A., B.Sc. (St. Andrews), Economic
 Botanist, Agricultural Department, Central Provinces.

11. *Vernaculars—*

Mr. R. M. Spence.
 Khan Bahadur Nizam-ud-din Ahmad.
 Mr. R. P. Divedi.

12. *Correlation of Studies—*

The Hon'ble Mr. A. I. Mayhew.
 Mr. A. C. Sells.
 Revd. A. Robertson.
 Mr. R. H. Beckett.
 Mr. J. Bremner.
 Mr. M. Owen.
 Pandit Kesho Ganesh Tamhan.
 Mr. C. E. W. Jones.

13. *Training College—*

The Hon'ble Mr. A. I. Mayhew.
 Mr. R. M. Spence.
 Mr. J. C. Evans, B.A. (Oxon.), Inspector of Schools, Nagpur Circle.

14. *Law—*

Mr. H. J. Stanyon, C.I.E., Barrister-at-Law, V.D., A.D.C., Additional
 Judicial Commissioner, Central Provinces.
 The Hon'ble Sir B. K. Bose.
 The Hon'ble Mr. M. R. Dixit.
 Mr. G. P. Dick, Barrister-at-Law, Government Advocate, and Stand-
 ing Counsel to the Central Provinces Administration.
 Dr. H. Gour, M.A., D.C.L. (Camb.), LL.D. (Dublin), Barrister-at-
 Law, Nagpur.
 Mr. J. Mitra, Barrister-at-Law, Nagpur.
 Mr. N. G. Bose.
 Mr. C. E. W. Jones.

15. *Examinations—*

The Hon'ble Mr. A. I. Mayhew.
 Revd. A. Robertson.
 Mr. A. C. Sells.
 Mr. R. H. Beckett.
 Mr. M. Owen.
 Mr. N. G. Bose.
 Mr. C. E. W. Jones.

16. Teaching Staff—

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. C. E. Low.
 The Hon'ble Sir B. K. Bose.
 The Hon'ble Rao Bahadur R. N. Mudholkar.
 Revd. A. Robertson.
 Mr. A. C. Sells.
 Mr. R. H. Beckett.
 Mr. M. Owen.
 Mr. C. E. W. Jones.

17. Scholarships—

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. C. E. Low.
 The Hon'ble Sir B. K. Bose.
 The Hon'ble Rao Bahadur R. N. Mudholkar.
 Mr. R. H. Beckett.
 Khan Bahadur Nizam-ud-din Ahmed.
 Khan Sahib Moulvi Abdul Qadir.
 Mr. R. P. Dvivedi.
 Mr. C. E. W. Jones.

18. Students' Affairs—

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. M. R. Dixit.
 Revd. A. Robertson.
 Mr. A. C. Sells.
 Mr. N. G. Bose.
 Khan Sahib Moulvi Abdul Qadir.
 Mr. C. E. W. Jones.

19. Library and Museum—

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. C. E. Low.
 Mr. R. H. Beckett.
 Mr. R. G. Allan, M.A. (Cantab.), Principal, Agricultural College,
 Nagpur.
 Mr. R. J. D. Graham.
 Revd. J. F. McFadyan.
 Mr. M. Owen.
 Mr. C. E. W. Jones.

20. Sites and Buildings—

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. C. E. Low.
 The Hon'ble Sir B. K. Bose.
 Mr. H. F. Mayes, Barrister-at-Law, I.C.S., Commissioner, Nagpur
 Division.
 Mr. C. C. S. Clark, M.I.C.E., Chief Engineer, Public Works
 Department (Roads and Buildings Branch), Central Provinces.
 Mr. C. A. Clarke, B.A. (Oxon.), I.C.S., Deputy Commissioner,
 Nagpur.
 Revd. A. Robertson.
 Mr. R. H. Beckett.
 Mr. M. Owen.
 Mr. C. E. W. Jones.
 Mr. Jhandamal, Temporary Engineer, Public Works Department,
 Central Provinces, who was placed on Special Duty in
 connection with the University scheme.

21. *Furniture and Equipment—*

The Hon'ble Mr. M. R. Dixit.
 Mr. A. C. Sells.
 Revd. A. Robertson.
 Mr. R. H. Beckett.
 Mr. M. Owen.
 Mr. C. E. W. Jones.

22. *Finance—*

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. C. E. Low.*
 The Hon'ble Sir B. K. Bose.
 The Hon'ble Rao Bahadur R. N. Mudholkar.
 Revd. A. Robertson.
 Mr. M. Owen.
 Mr. C. E. W. Jones.

23. *Constitution—*

The Hon'ble Mr. A. I. Mayhew.
 The Hon'ble Mr. C. E. Low.
 The Hon'ble Sir B. K. Bose.
 The Hon'ble Rao Bahadur R. N. Mudholkar.
 The Hon'ble Mr. M. R. Dixit.
 Mr. R. M. Spence.
 Mr. A. C. Sells.
 Revd. A. Robertson.
 Mr. R. H. Beckett.
 Mr. C. E. W. Jones.

*The Hon'ble Mr. C. E. Low was unable to be present at the meetings of the Finance Sub-Committee.



APPENDIX II.

List of persons who were consulted by the Committee.

- The Hon'ble Colonel G. W. P. Dennys, M.R.C.S., L.R.C.P., C.I.E., I.M.S., Inspector-General of Civil Hospitals, Central Provinces, upon medical arrangements.
- Mr. J. T. Marten, M.A. (Oxon.), I.C.S., Second Secretary to the Hon'ble the Chief Commissioner, Central Provinces, and Mr. F. D. Gordon, M.A., Comptroller, Central Provinces, upon the financial system of the University.
- Major T. G. N. Stokes, B.A., M.B., B.Ch., B.A.O. (Dublin), L.M. (Dublin), D.T.M. & H., I.M.S., Sanitary Commissioner, Central Provinces, Mr. W. H. Todd, Sanitary Engineer, Central Provinces, and Mr. J. Desmond, Assistant Engineer, Nagpur Division, upon sanitary arrangements and water-supply.
- Mr. E. C. Carter, Secretary, Young Men's Christian Association, Calcutta, upon a scheme for physical education.
- Mr. C. M. B. Merish, A.M.I.E.E., Electrical Inspector, Central Provinces, upon the electric supply.
- Mr. G. Gardner-Brown, M.A. (Cantab.), Director of State Education, Indore, Mr. G. Anderson, M.A. (Oxon.), Professor of History, Elphinstone College, Bombay, and Mr. G. G. R. Hunter, B.A. (Oxon), Professor of History, Government College, Jubbulpore, upon historical studies.
- Mr. S. C. Williams, M.A. (Cantab), B.A. (London and Wales), Port Commissioner's Office, Calcutta, upon economic studies.
- Mahamahopadhyaya Satis Chandra Vidyabhusana, M.A., Ph. D., M.R.A.S., Principal, Sanskrit College, Calcutta, upon Sanskritic studies.
- Major W. Selby, D.S.O., F.R.C.S., I.M.S., Principal, King George's Medical College, Lucknow, upon questions connected with the biology course.
- Mr. A. Davies, M.A. (Oxon.), Barrister-at-Law, Principal, Government Law School, Madras, upon the scheme of legal studies.
- Mr. A. C. L. Wilkinson, M.A. (Cantab), Professor of Mathematics, Elphinstone College, Bombay, upon the mathematics courses.
- Shams-ul-ulama Moulvi Shibli Sahib Nomani, Lucknow, upon the Arabic and Persian courses.
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APPENDIX III.

Courses of Study.

[NOTE.—The courses of study outlined below have been prepared primarily with a view to enabling the Committee to estimate the requirements of the University and the constituent colleges in the shape of teaching staff, and partly in order to indicate the general scope and character of the instruction, which, in the opinion of the Committee, the University should aim at imparting. The courses are not intended for final acceptance by the University.]

I.—ENGLISH.

(a) Intermediate Arts and Science Course.

- (1) Set Prose Texts.
- (2) Set Poetry Texts.
- (3) Principles of Composition and Rhetoric.
- (4) An essay.

(b) B. A. Pass Course.

- (1) Set Prose Texts.
- (2) Set Poetry Texts.
- (3) Principles of Composition and Rhetoric.
- (4) An essay.

The course of instruction should include the outlines of the development of the English language.

N. B.—With regard to both the Intermediate and the B. A. Pass Course, the Sub-Committee recommend that a number of books for general reading should be prescribed in addition to the set Prose and Poetry texts, and that the subject for the essay should be selected from the books for general reading. The general reading should relate to subjects which have no direct connection with other courses of instruction.

(c) B. A. Honours Course.

- (1) The works of a special author subsequent to 1560.
- (2) (a) English literature from 1560 to 1660.
- (b) English literature from 1660 to 1780.
- (c) English literature from 1780 to 1900.

The history of each period of literature should be studied with special reference to the works of certain representative authors to be prescribed from time to time.

(3) History of the English language with special reference—

- (a) to selected works of Chaucer.
- (b) to select specimens of early English literature.

(4) An essay.

(d) Subsidiary Course in English for Candidates for the B. A. Honours Degree in subjects other than English.

(1) Course for candidates for Honours in Arabic, Persian, Sanskrit and Mathematics, and for the B. Sc. Pass degree :—

- (a) Set Prose and Poetry Texts (not so many as for the B. A. Pass Course in English).
- (b) An essay.

(2) Course for candidates for Honours in History, Economics and Philosophy :—

- (a) Set books of permanent literary value related to Historical, Philosophical and Economic subjects.
- (b) An essay.

N. B.—With regard to both subsidiary courses, the Sub-Committee recommend that a number of books for general reading should be prescribed in addition to the set Prose and Poetry Texts, and that the subject for the essay should be selected from the books for general reading. The general reading should relate to subjects which have no direct connection with other courses of instruction.

A subsidiary course should be a one year's course. Instruction in subsidiary Courses (1) and (2) should be given in alternate years. By this arrangement it will be possible to economize in teaching staff. The subsidiary course should be taken either in the first or second year after passing the Intermediate Examination.

(e) **M. A. Course (for Students who have taken a B. A. Honours Degree).**

One of the following subjects :—

- (1) English literature from Chaucer to 1560 with special reference to Chaucer's works.
- (2) English literature from 1560 to 1660.
- (3) English literature from 1660 to 1780.
- (4) English literature from 1780 to 1900.
- (5) The development of the English Drama with special reference to the works of prescribed authors.
- (6) The development of the English Novel with special reference to the works of prescribed authors.
- (7) The development of the English Essay with special reference to the works of prescribed authors.

(f) **M. A. Course (for Candidates who have taken the B. A. Pass Degree).**

Such candidates should take a course of one year in certain portions of the B. A. Honours Course before taking Course (e). The qualifying course should be as follows :—

- (1) Two of the three periods of English literature prescribed for the B. A. Honours Course.
- (2) The history of the English Language, etc.

II.—PHILOSOPHY.

(a) **Intermediate Course.**

Logic { Inductive.
 { Deductive.

(b) **B. A. Pass Course.**

Ethics.
Psychology.
Elementary Metaphysics.

N. B.—The aim in this course should be to encourage in the student first-hand acquaintance with selected works of a few representative philosophers. Instruction should be based on such works as Aristotle's *Ethics* and Berkeley's "Principles". Lists of suitable works should be published.

(c) **B. A. Honours Course.**

Logic.
Metaphysics.
Ethics and Political Philosophy.
Psychology.
Philosophy of Religion.
History of Philosophy.

i. e., one of the following to be studied with reference to its position in the History of Philosophy :—

- (a) Greek Philosophy.
- (b) Indian Philosophy.
- (c) A prescribed period of modern European Philosophy.

(d) **B. A. Honours (Subsidiary Course).**

The Republic of Plato.
The Ethics of Aristotle (translation to be prescribed).
One or more modern English philosophical works of permanent literary value.
Composition of essays on current ethical, social or scientific questions, regarded from the philosophical standpoint.

(e) M. A. Course.

The History of Philosophy.

A modern work or works dealing constructively with the general problems of Philosophy.

One of the following subjects :—

- * (i) Experimental Psychology.
- (ii) Comparative Religion.
- (iii) Political Philosophy.
- (iv) A period or system of Indian Philosophy.

A portion of the examination in Experimental Psychology will be practical.

III.—HISTORY.**(a) Intermediate Arts Course.**

- (1) Indian History under British Rule, and Indian Administration.
- (2) Outlines of English History, including the expansion of the British Empire.

(b) B. A. Pass Course.

- (1) Hindu and Muhammadan periods of Indian History.
- (2) History of Europe since 1789.
- (3) English Political and Constitutional History since 1688.

N. B.—A standard work should be prescribed in one or other of the above groups in addition to ordinary text-books.

(c) B. A. Honours Course.

- (1) Indian History.
- (2) English History, with special reference to the development of the English Constitution.
- (3) Mediæval and Modern European History.
- (4) Political Science, including Comparative Politics.
- (5) Economic History of England and India from 1760.
- (6) A special period of History to be studied in standard authors.
- (7) An essay on a subject within the range of the course of study.

(d) Subsidiary Course in History for Candidates for the B. A. Honours Degree in English.

- (1) Outlines of English History.
- (2) A special period of English History, involving a study of one or more contemporary historians.

(e) M. A. Course (for Candidates who have taken the B. A. Honours Course).

- (1) A special period of Indian History selected either—

- (a) from the Hindu period, or
- (b) from the Muhammadan period, or
- (c) from the British period,

to be studied in original printed authorities.

- (2) A special period of European History selected from either—

- (a) Mediæval European History, or
- (b) Modern European History, or
- (c) English History.

- (3) A special subject in Political Science.
- (4) An essay.

(f) M. A. Qualifying Course (for Candidates who have taken the B. A. Pass Course).

Candidates for the M. A. degree who have not taken the B. A. Honours Course should take a qualifying course of study of one year in the following subjects before taking Course (e) :—

- (1) Political Science and Comparative Politics (as in the B. A. Honours Course).
- (2) English History with special reference to the development of the Constitution (as in the B. A. Honours Course).
- (3) Mediæval and Modern European History (as in the B. A. Honours Course).

They should also take an essay.

IV.—ECONOMICS.

1.—Intermediate Course.

- (a) Simple Economics (Analytical and Descriptive), with special reference to India.
Standard—Moreland's Introduction to Political Economy for Indian Students.
- (b) Economic Geography of India.

2.—B. A. Pass Course.

- (a) Analytical and Descriptive Economics, with special reference to India.
- (b) Economic History of England.

3.—B. A. Honours Course.

- (a) Analytical and Descriptive Economics (including statistical and logical methods).
- (b) Economic History of England, and Economic History of India since 1760.
- (c) History of Economics, including a special study of a great economist.
- (d) Public Administration in England and in India.
- (e) Economic Geography with special reference to the economic development of the British Empire.
- (f) Subjects in Indian Economics.

4.—Subsidiary Course in Economics for Candidates for B. A. Honours in English.

Analytical and Descriptive Economics (B. A. Pass Standard).

5.—M. A. (one year's Qualifying Course for Candidates who have taken the B. A. Pass Degree).

- (a) Analytical and Descriptive Economics (B. A. Honours Standard).
- (b) History of Economics.
- (c) Public Administration in England and in India.
- (d) Subjects in Indian Economics.

6.—M. A. Course [for Candidates who have taken the Honours Course or the Qualifying Course, i. e., (5) above].

- (a) Comparative study of Social Institutions.
- (b) A special subject in General or Indian Economics.

V.—SANSKRIT.**(a) Intermediate.**

- (i) Prescribed Text-books in easy verse such as the Raghuvansam with general grammatical questions on the books prescribed.
- (ii) Prescribed Text-books in easy prose such as Dusakumarcharitam with general grammatical questions on the books prescribed.
- (iii) Grammar and composition—
Selections from some standard Grammar such as Laghukaumudi, in addition to books like the Sanskrit Readers of Dr. Bhandarkar or Apte's Guide.
- (iv) Composition and unseen translation.

(b) B. A. Pass Course.

- (i) Prescribed Text-books in prose and verse.
- (ii) Prescribed Text-books in Drama or Alankar or old records such as Prachinalekhamala.
- (iii) Grammar, composition, unseen translation and the history of Sanskrit literature.

(c) B. A. Honours Course.

- (i) Prescribed Text-books consisting of selections from Vedic literature. Questions should also be set from some History of Sanskrit literature.
- (ii) Prescribed Text-books in prose, verse and drama.
- (iii) Grammar and unseen translation.
- (iv) Composition.
- (v) Any two of the following subjects :—
 - (1) Rhetoric.
 - (2) Philosophy.
 - (3) Ancient Sanskrit records such as Prachinalekhamala, as published in the Nirnaya Sagar Press, Bombay.
 - (4) Selections from elementary Pali and Prakrita books.

(d) M. A. Course.

- (i) Selections from the Vedic literature and Vedic Grammar.
- (ii) Sanskrit Grammar and Comparative Philology.
- (iii) History of Sanskrit literature with an essay in English.
- (iv) Composition and unseen translation.
- (v) Any one of the following :—
 - (1) Language and literature.
 - (2) Mimansa and Dharma Shastra.
 - (3) Philosophy.
 - (4) Palæography and Epigraphy.

(e) Subsidiary Course in Sanskrit for Candidates for the B. A. Honours Degree in English.

- (i) Prescribed Text-books in prose, verse and drama.
- (ii) Translation from English into Sanskrit.

VI.—ARABIC.**(a) Intermediate Course.**

- (i) Prescribed Poetry Texts, and Grammar.
- (ii) Prescribed Prose Texts, and Grammar.
- (iii) Composition and unseen translation.

(b) B. A. Pass Course.

- (i) Prescribed Poetry Texts, and Grammar.
- (ii) Prescribed Prose Texts, and Grammar.
- (iii) Composition and unseen translation.

(c) B. A. Honours Course.

- (i) Poetry Texts prescribed for the Pass Course, and Grammar.
- (ii) Prose Texts prescribed for the Pass Course, and Grammar.
- (iii) Composition and unseen translation.
- (iv) Poetry and Prose Texts prescribed especially for the Honours Course.
- (v) Arabic Prosody and Rhetoric, and History of Arabic Literature.

(d) M. A. Course.

- (i) Prescribed Poetry Texts, Rhetoric and Prosody.
- (ii) Prescribed Prose Texts, Rhetoric and Prosody.
- (iii) Composition and unseen translation.
- (iv) Essay.

VII.—PERSIAN.**(a) Intermediate Course.**

- (i) Prescribed Poetry Texts, and Grammar (Etymology).
- (ii) Prescribed Prose Texts, and Grammar (Syntax).
- (iii) Composition and unseen translation.

(b) B. A. Pass Course.

- (i) Prescribed Poetry Texts, and Grammar.
- (ii) Prescribed Prose Texts, and Grammar.
- (iii) Composition and unseen translation.

(c) B. A. Honours Course.

- (i) Poetry Texts prescribed for the Pass Course, and Grammar.
- (ii) Prose Texts prescribed for the Pass Course, and Grammar.
- (iii) Composition and unseen translation.
- (iv) Poetry and Prose Texts prescribed especially for the Honours Course.
- (v) Persian Prosody and Rhetoric, and the History of Persian Literature.

(d) M. A. Course.

- (i) Prescribed Poetry Texts, and Rhetoric and Prosody.
- (ii) Prescribed Prose Texts, and Rhetoric and Prosody.
- (iii) Composition and unseen translation.
- (iv) Essay.

VIII.—MATHEMATICS.**(a) Intermediate Arts and Science Course.**

- (i) Algebra, as far as exponential theorem.
Trigonometry, as far as solution of triangles.
- (ii) Solid Geometry :—(a) Substance of Euclid, Book XI.
(b) Mensuration of areas and solids.
Analytical Geometry of straight line and circle, with principal properties of the parabola.
- (iii) Statics.
Dynamics, up to and including projectiles.

(b) B. A. and B. Sc. Pass Course and B. Sc. Honours Subsidiary Course for Students taking Physics as their principal Subject.**(i) Algebra—**

Convergency and divergency of series.
Partial fractions.

Simple properties of an equation of n^{th} degree.

Conic Sections (to be treated analytically with geometrical proofs, where necessary)—

Parabola, ellipse and hyperbola referred to rectangular axis.

Cartesian and polar co-ordinates.

Reduction and tracing of curves of second degree.

Trigonometry—

De Moivre's theorem.

Expansion $\sin \Theta$, $\cos \Theta$, $\sin \Theta$, $\cos \Theta$.

Hyperbolic functions.

(ii) Differential Calculus—

Leibnitz's theorem.

Partial differentiation.

Taylor's and Maclaurin's Expansions.

Tangents and normals to curves.

Maximum and minimum values of functions involving one independent variable.

Tracing of plane curves.

Multiple points, asymptotes, and curvature of plane curves.

Integral Calculus—

Integration by parts.

Integration involving trigonometrical functions and the square root of a quadratic expression.

Double and multiple integrals.

Determination of lengths of curves, areas, volumes, centres of mass and moments of inertia.

Differential Equations—

Ordinary equations involving the first and second degrees, and linear equations with constant co-efficients.

Elementary applications, including motion of a particle having one degree of freedom; motion of rigid body about a fixed axis; simple harmonic motion.

(iii) Dynamics—

Impact.

Motion in a circle, the hodograph.

Hydrostatics (involving the elementary use of the Calculus).

Astronomy (without the use of Spherical Trigonometry).

Right ascension and declination of a star.

Refraction and parallax.

The earth's orbit.

Precession, nutation and aberration.

Terrestrial latitude and longitude.

(c) B. A. and B. Sc. Honours Course.

This course will include the B. A. and B. Sc. Pass Course in addition to the following :—

(i) Algebra—

Continued fractions.

Summation of series.

Determinants.

Plane Trigonometry—

A fuller treatment of the functions of complex quantities.

Spherical Trigonometry (as far as required for Astronomy).

(ii) Analytical Conics—

The general equation of the second degree in Cartesian co-ordinates.

Solid Geometry—

Equations representing straight lines and planes.

The general equation of the second degree in Cartesian co-ordinates.

Standard equations of ellipsoids, hyperboloids, paraboloids, cones and cylinders.

Curves and surfaces in general.

(iii) Differential Calculus—

Expansions, maximum and minimum values of function of several variables.

Envelopes.

Pure Geometry—

Harmonic ranges and pencils : anharmonic ratios.

Co-axal circles, orthogonal circles, centres of similitude.

Inversion.

Parallel and orthogonal projection.

Homography and involution.

(iv) Integral Calculus—

Formulæ of reduction.

Definite integrals.

Differential Equations.

(v) Statics (treated analytically)—

Up to and including the principle of Virtual work.

Dynamics of a particle—

Expressions for velocities and accelerations in Cartesian and polar co-ordinates.

Equations of motion.

Parabolic motion under gravity.

Central Orbits.

Rigid Dynamics—

D'Alembert's Principle.

Equations of motion of a rigid body moving parallel to a fixed plane.

Principle of energy.

Principle of linear and of angular momentum.

The Compound pendulum.

(vi) Hydrostatics

Astronomy.

(d) B. Sc. Honours Subsidiary Course for students taking Chemistry as their principal subject.

Differential and Integral Calculus. Differential Equations.

(e) M. A. and M. Sc. Course.

The course should include as many as possible of the *ordinary* subjects enumerated below and one *special subject* to be chosen by candidates after consultation with the University Professor.

I.—PURE MATHEMATICS.

Ordinary Subjects—

1. Higher Algebra.
2. Theory of Equations.
3. Analytical Geometry.
4. Differential and Integral Calculus : Calculus of Variations.
5. Differential Equations.

Special Subjects—

1. Theory of functions.
2. Theory of numbers.
3. Theory of invariants.
4. Projective Geometry.
5. Vector Analysis and quaternions.
6. Spherical harmonics and harmonic analysis.
7. Differential Geometry.
8. Elliptic Functions.

II.—APPLIED MATHEMATICS.

Ordinary Subjects—

1. Dynamics of a particle.
2. Analytical Statics.
3. Rigid Dynamics.
4. Hydrostatics.

Special Subjects—

1. Hydrodynamics.
2. Elasticity.
3. Spherical Astronomy.
4. Heat.
5. Optics.
6. Sound.
7. Electricity and Magnetism.

IX.—CHEMISTRY.

1.—Intermediate Arts and Science Course.

(a) *Inorganic Chemistry—*

Elements and compounds. Mixtures.

The Laws of Chemical Combination.

Valency.

The determination of equivalents, molecular and atomic weights.

Chemical symbols, formulæ and equations.

The production and properties of the following elements and their more important chemical compounds, the whole to be treated in an elementary manner :—

Hydrogen, chlorine, bromine, iodine, oxygen, sulphur, nitrogen, phosphorus, arsenic, antimony, carbon, sodium, potassium, copper, calcium, strontium, barium, magnesium, zinc, mercury, lead, tin and iron.

The periodic classification with special reference to the elements named above.

The character of chemical changes, including combustion, oxidation and reduction.

Diffusion. Dissociation. Electrolysis.

(b) *Organic Chemistry—*

As required for the Preliminary Scientific Examination of the Allahabad University.

(c) *Practical—*

Preparation of the common gases and inorganic salts.

Quantitative. Gravimetric estimation of iron, silver and copper.

Volumetric determination of acid and alkali.

2.—B. Sc. Pass Course.

(a) *Inorganic Chemistry—*

The methods of preparation and properties of the more important elements and their chief compounds, treated in accordance with the periodic classification.

(b) *Organic Chemistry—*

The Paraffins and their simple derivatives.

The unsaturated hydrocarbons and their properties. Benzene, toluene and their simple substitution derivatives.

Naphthalene and its properties.

(c) Physical Chemistry—

The Kinetic theory of gases and the gas laws.
 Van Der Waal's equation.
 The phase rule.
 The Ionic theory of solution.
 Osmotic pressure. Molecular weight.
 Reversible chemical changes. Mass action.
 Avidity of acids and bases.
 Elements of spectrum analysis, and thermo-chemistry.

(d) Practical—

Qualitative analysis of inorganic mixtures.
 Preparation of simple organic compounds.
 Quantitative. Gravimetric estimation of radicles present in pure salts.
 Volumetric determination of acid and alkali, iron by permanganate, and silver or chloride.

3.—B. Sc. Honours Course.

- (a) General Inorganic Chemistry.
- (b) Physical Chemistry.
- (c) Organic Chemistry.
- (d) The History of Chemistry in outline, including the work of distinguished Chemists.

(e) Practical—

The practical work will include the quantitative determination of inorganic radicles and the detection of organic compounds present in mixtures.

4.—B. Sc. Honours Subsidiary Course for Students taking Physics as their principal subject.

Physical and General Chemistry.

5.—M. Sc. Course.

This will be a continuation of the B. Sc. Honours Course. Candidates will be required to specialize in certain branches of the subject, which will be selected each year by the University Professor.

Practical—

Quantitative organic determinations and practical physical chemistry.

X.—PHYSICS.**1.—Intermediate Arts and Science Course.****(a) Elementary Hydrostatics—**

To include pumps and siphons.

(b) Heat—

Temperature and its measurements.
 Calorimetry.
 Expansion of solids, liquids and gases.
 Adiabatic and Isothermal Expansion.
 Change of state.
 Hygrometry.
 Transmission of Heat.
 Mechanical Equivalent of Heat.

(c) *Light*—

Reflection and Refraction.
Lenses and Mirrors.
Optical Instruments.
The Spectrum.
Velocity of Light.

(d) *Sound*—

Wave-Motion.
Velocity of Sound.
Intensity, Pitch and Quality.
Vibration of air-columns and strings.
The Musical Scale.
Interference of Sound Waves.

(e) *Electricity and Magnetism*—

Laws of Magnetic Force.
Terrestrial Magnetism.
Fundamental facts of Electrostatics.
Potential and capacity. Condensers.
Simple Electrical Machines.
Atmospheric Electricity.
Voltaic Cells.
Ohm's Law.
Magnetic effect of a current.
Thermal effect of a current.
Chemical effect of a current.
Description and simple theory of the common electrical instruments,
e. g., electro-magnet, induction coil, simple dynamo, etc.

(f) *Practical*—

Experiments to illustrate above.

2. **B. Sc. Pass, and B. Sc. Honours Subsidiary Course (for students taking Chemistry as their principal subject.)**

The Intermediate Course carried to a more advanced stage, together with the following :—

(a) *Properties of Matter*—

Simple Harmonic Motion. Simple pendulum.
Rotational Motion, including moment of inertia and moment of momentum.
Newton's Law of Gravitation. Density of the Earth.
Elementary Elasticity. Torsion. Bending of rods in simple cases.
Surface Tension.
Viscosity.

(b) *Heat*—

Continuity of State.
Properties of Vapours.
Vapour pressure and vapour density.
Conductivity of solids and its measurement.
Laws of radiation.
Deviations from Boyle's Law.
Laws of Thermodynamics.
Thomson's Scale of Temperature.

(c) *Light*—

Dispersion and Chromatic Aberration.
Spherical Aberration and allied phenomena.
Thick Lenses.
The Undulatory Theory of Light.
Interference and Diffraction.
Polarisation and double Refraction.

(d) Sound—

Frequency and Pitch of Notes.
 Resonance and Forced Oscillations.
 Analysis of Vibration.
 Vibration of Rods, Plates and Membranes.
 Sensitive Flames.
 Beats. Concord and Discord. Combination tones.

(e) Electricity and Magnetism—

Specific Inductive Capacity.
 Thermo-electricity.
 Electro-magnetic Induction.
 Alternating currents.
 Units and Dimensions.
 Elements of Radio-Activity.
 The Magnetisation of Iron.

(f) Practical—

Experiments to illustrate above.

3.—B. Sc. Honours Course.

A more advanced treatment of the subjects included in the B. Sc. Pass Course, together with the following :—

(a) Properties of Matter —

Rigid Dynamics, up to and including the compound pendulum.
 Variation of gravity over the surface of the Earth.
 Attraction. Potential and its measurement in simple cases.
 Laplace's Theory of Capillarity.

(b) Heat—

Equations relating to the fluid state of matter—
 Kinetic Theory.
 Conductivity of Fluids.
 Thermodynamic Equations.
 Thermodynamic Potential.
 Energy of Radiation.

(c) Light—

Colours of thin plates.
 Rotatory Polarisation.

(d) Sound—

Dynamical basis.
 Vibrating systems.

(e) Electricity and Magnetism —

Electrical Images and Inversion.
 Elements of Conduction of Electricity through Gases.

(f) Practical—

Experiments to illustrate above.

4.—M. Sc. Course.

This course will consist of the following syllabus, certain subjects of which will be very fully treated :—

(a) Light—

Spectroscopy.
 Electromagnetic Theory.
 Optical Properties of Crystals.
 Theories of Dispersion.
 Absorbing Media.

(b) Electricity and Magnetism—

General Theory of Current Induction and Electromagnetic Action.

Absolute measurement of Resistance.

Measurement of "v".

Electrical Oscillations.

Together with a special course in one of the following :—

(1) Conduction of Electricity through Gases.

(2) Radio-Activity.

(3) Magneto-Optics.

(c) Practical—

Experiments to illustrate above.

XI.—ZOOLOGY.

I.—Intermediate Arts and Science Course.

The structure and life-history of *Amæba* and *Paramæcium*. Protoplasm, the animal cell, cell-division.

The structure, life-history and reproduction of *Hydra*. Formation of tissues. The Protozoa and Metazoa.

The structure, life-history, reproduction and embryology of the earthworm. Combinations of tissues; histology of its principal tissues and parts.

The structure, life-history, reproduction and embryology of the frog. Its anatomy, the physiology of digestion, respiration, circulation and excretion; the histology of its epithelia, nervous, muscular and connective tissues.

An elementary study of the anatomy and osteology of the rabbit.

A general classification of the animal kingdom and a study of the distinguishing characteristics only of the principal phyla.

Reproduction. Fertilization and segmentation. The three primary germ layers and the parts derived from them.

Practical work—

Microscopic study of *amæba*, *paramæcium* or *vorticella* and *hydra*.

Dissection of earthworm and frog.

Dissection of rabbit or guinea-pig, its alimentary, vascular and reproductive systems.

The osteology of the frog and rabbit.

Histology.—(a) Earthworm,—transverse sections and fresh preparations.

(b) Frog,—muscle, nerve, cartilage, bone, blood, connective tissue, liver, kidney, stomach, spinal cord and brain.

2.—B. Sc. Pass and B. Sc. Honours Subsidiary Course.

The animal cell, its structure and phenomena.

The animal tissues, their general characteristics and histology.

A study of the invertebrata as illustrated by—

Protozoa	...	...	<i>Amœba</i> and <i>paramæcium</i> .
Cœlentera	...	...	<i>Hydra</i> , <i>obelia</i> .
Annulata	...	...	Earthworm, <i>neries</i> .
Arthropoda	...	...	Cray-fish or prawn, cockroach, scorpion.
Mollusca	...	...	Anodonta or unio, and a pond snail.

A study of the Chordata :—

1. Acrania—

Urochordata	...	An Ascidian.
Cephalochordata	...	<i>Amphioxus</i> .

2. Craniata—

Pisces	...	Scyllium or other Elasmobranch.
Amphibia	...	The frog.
Reptilia	...	A lizard.
Aves	...	Columba.
Mammalia	...	Lepus.

The outlines of the embryology and development of frog, chick and rabbit.

Reproduction, Parthenogenesis, Metamorphosis.

The elementary physiology of all the various organs of the animal body as shown in rabbit and frog.

The theory of evolution, — variation, heredity, adaptation. Mendelism.

Practical work—

The anatomy of the following animals, as shown by simple dissections, where possible, and by microscopic study :—Amæba, Vorticella, Hydra, Obelia Cockroach and Amphioxus.

Full dissection of the Earthworm, Crayfish or Prawn, Anodonta or Unio, Scyllium, Frog, Columba and Lepus.

The osteology of Frog, Columba and Lepus.

3.—B. Sc. Honours Course.

The morphology, comparative anatomy and development of the Vertebrate and Invertebrate groups.

The general principles of Embryology.

The geographical and geological distribution of animals.

The theory of evolution.

Practical work.—

The B. Sc. pass syllabus, further amplified,—with the following types added—Leech, scorpion, mosquito, a teleostean fish.

A thorough knowledge of microscopic technique.

4.—M. Sc. Course.

Courses of advanced lectures on—

One or more special groups of animals.

Such subjects as,—“Heredity and Evolution.”

“Colour and Mimicry,” &c.

Practical work of an advanced character in the Laboratory and in the Field, under supervision.

XII.—BOTANY.

1.—Intermediate Arts and Science Course.

External Morphology—

The root, stem, leaf, flower, fruit and seed of a typical Phanerogam; their chief characters, important modifications and their functions treated from an elementary standpoint.

Reproduction and pollination.

Internal Morphology—

The cell, its formation, growth and contents and permanent characters.

Tissue systems, tegumentary, ground and stellar, etc.

Systematic Botany.—Structure and life history of—

A Bacteria (*B. subtilis*).

An Alga (*Spirogyra*).

Fungi, Mucor and Yeast.

Practical.—To illustrate the theoretical course—

The study of the external characters of the root, stem, leaf, flower, fruit and seed of a typical dicotyledon, together with the main modifications.

Application of the above to plant description.

Germination of seed with simple experiments to illustrate the various plant functions.

Systematic Botany.—

Detailed study of the flowers of—

Sarson (*Brassica juncea*).Cotton (*Gossypium*).Pea (*Pisum sativum*).Sun-flower (*Helianthus annuus*).Morning Glory (*Ipomoea* sp.).

Detailed study of—

Bacillus subtilis.

Spirogyra.

Mucor mucedo.

2 — B. Sc. Pass and B. Sc. Honours Subsidiary Course.**(a) Internal Morphology—**

The cell, its structure and phenomena.

Tissues, their formation, character and histology.

(b) The morphology (external and internal) and life histories of—**1. Thallophyta—**(i) Bacteria (*B. subtilis*).

(ii) Chlorophyceæ (vaucheria).

(iii) Hymenomycetes (Cystopus and Agaricus).

2. Bryophyta—

(i) Hepaticæ (Riccia).

(ii) Musci (Funaria or other moss).

3. Pteridophyta—

Filicinæ (Nephrodium or other fern).

Lycopodinæ (Selaginella).

4. Spermaphyta —

(i) Gymnospermæ (Cupressus, Thuja or Pinus).

(ii) Angiospermæ (Malvaceæ, Meliaceæ, Leguminosæ, Cucurbitaceæ, Compositæ, Rubiaceæ, Solonaceæ, Urticaceæ, Orchidaceæ, Liliaceæ, Palmæ, Gramineæ and Cruciferae).

(c) A comparative study of the vegetative and reproductive organs of Phanerogams and Cryptogams, including their histology.

(d) The chief modern systems of classification.

(e) An elementary knowledge of—

Ecology.

Plant distribution.

Practical—

A practical study of the plants named in 3 above, including—

(1) Dissection of the plants or parts thereof.

(2) Microtechnique—

(a) Preparation and study of microscopical sections.

(b) Uses of reagents, stains and their reactions.

Classification.—A practical study of the orders named above under (b) 4 (ii) and referring plants or parts of plants to their appropriate natural orders.

Description of plants in technical language.

3. — B. Sc. Honours Course.**(a) General Morphology of Phanerogams and Cryptogams with—**

(i) a fairly extensive knowledge of the characterization and classification of tissue systems from the physiological point of view.

(ii) a special knowledge of one of the main groups — Thallophyta, Bryophyta, Pteridophyta or Spermaphyta.

- (b) The morphological characters, systematic position, use and methods of cultivation of the more important economic plants in India.
- (c) Plant Physiology—Stability, nutrition including special forms, respiration, growth, movements, irritability, reproduction.
- (d) Ecology and plant distribution with special reference to the Indian Flora.
- (e) Historical Botany—Short sketch.

Practical—

A detailed knowledge of microtechnique and microchemistry.
 Identification of plants.
 Experiments to illustrate plant physiology.
 A detailed study of the special group chosen in (a) (ii).

4.—M. Sc. Course.

The student should carry his general studies to a more advance as tanged should make a special study of one branch of the subject. Short courses of lectures on advanced subjects, evolution, heredity, mendelism, etc.

Practical work of an advanced nature.

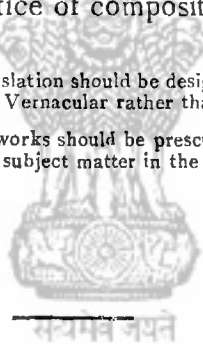
XIII.—VERNACULARS.

Intermediate Arts and Science Course.

- (a) Translation from the Vernacular into English and from English into the Vernacular.
- (b) Essay writing in the Vernacular.
- (c) The principles and practice of composition, *e. g.*, explanation of idioms by paraphrase.

NOTE.—(a) The exercises in Translation should be designed to develop the students' knowledge and command of the Vernacular rather than of English.

(b) A few modern prose works should be prescribed as models of style, but no questions should be set on the subject matter in the examination.



APPENDIX IV.

Distribution of Students by Subjects.

A.—In the University and the Colleges in Nagpur.

The 1,000 Arts and Science undergraduate students of the University and Nagpur Colleges are distributed for the purpose of estimating the teaching staff, according to stages of study and subjects, as follows :—

(a) According to stages—

Intermediate.				B. A. & B. Sc. (Pass).			
		Arts.	Science.			Arts.	Science.
1st year	...	175	100	1st year	...	120	60
2nd year	...	175	100	2nd year	...	120	60
B. A. & B. Sc. (Honours.)				Arts.	Science.		
1st year	...	...	...	20	10		
2nd year	...	...	...	20	10		
3rd year	...	...	...	20	10		

(b) According to subjects—

(i) In each year of the Intermediate stage (2 years' course).

English	...	...	275
Vernacular	...	...	275
Sanskrit	...	...	100
Persian	...	...	15
Arabic	...	...	10
History	...	...	150
Logic	...	...	100
Elementary Economics	...	...	100
Mathematics	...	...	100
Physics	...	...	100
Chemistry	...	...	125
Biology	...	...	40

(ii) In each year of the B. A. and B. Sc. (Pass) stage (2 years' course).

English	...	...	120
Sanskrit	...	...	50
Persian	...	...	10
Arabic	...	...	5
History	...	...	60
Economics	...	...	60
Philosophy	...	...	40
Mathematics	...	...	70
Physics	...	...	50
Chemistry	...	...	60
Zoology	...	...	10
Botany	...	...	10
English (for Science students)	...	...	60

(iii) In each year of the B. A. and B. Sc. (Honours) stage (3 years' course).

English	...	...	4
Sanskrit	...	...	2
Arabic	...	...	...
Persian	...	...	...
History	...	...	4
Economics	...	...	6
Philosophy	...	...	2
Mathematics	...	...	2
Physics	...	...	6
Chemistry	...	...	6
Zoology	...	...	4
Botany	...	...	4

B.—In the Robertson College, Jubbulpore, and in the King Edward College, Amraoti.

The 400 students of the Jubbulpore College and the 300 of the Amraoti College are distributed according to stages of study and subjects as follows :—

(a) *According to stages—*

Intermediate.—		Jubbulpore.	Amraoti.
Arts {	1st year	100	... 80
	2nd „	100	... 80
Science {	1st year	25	... 20
	2nd „	25	... 20
<i>B. A. & B. Sc. (Pass).</i>			
Arts {	1st year	60	... 50
	2nd „	60	... 50
Science {	1st year	15	... ..
	2nd „	15	... ..

(b) *According to subjects—*

(i) In each year of the Intermediate Course.

	Jubbulpore.	Amraoti.
English	125	... 100
Vernacular	125	... 100
Sanskrit	40	... 40
Persian and Arabic	15	... 15
History	80	... 60
Logic	60	... 50
Elementary Economics	50	... 45
Mathematics	70	... 60
Physics	25	... 20
Chemistry	30	... 30

(ii) In each year of the B. A. and B. Sc. (Pass) courses.

	Jubbulpore.	Amraoti.
English	60	... 50
Sanskrit	20	... 15
Persian and Arabic	5	... 5
History	35	... 30
Economics	25	... 20
Philosophy	20	... 20
Mathematics	30	... 10
Physics	15	... ..
Chemistry	15	... ..
English (for Science	15	... ..
• students).		

APPENDIX V.

Estimate of Accommodation.

The University and Colleges in Nagpur.

			Area. Sq. ft.
1.—UNIVERSITY BUILDING—			
Convocation and Examination Hall	...	...	11,000
Senate room	...	...	1,500
Room for Faculties and Boards of Studies...	...	...	1,500
Vice-Chancellor's room	...	...	600
Registrar's room	...	...	600
Room for Superintendent of Registrar's Office	...	...	300
General office room	...	...	800
Record room	...	...	600
Store room	...	...	400
Chair store room	...	...	1,000
Strong room	...	...	300
<i>Library —</i>			
Store room	...	...	3,000
Reading room for students	...	...	2,730
Reading room for teachers	...	...	1,380
Room for periodicals	...	...	600
Librarian's room	...	...	600
Office room	...	...	300
Art Museum	...	...	6,336
<i>Seminars—</i>			
Eight private rooms for the University Professors of English, History, Economics, Mathematics, Sanskrit, Arabic, Persian and Philosophy, each	...	...	300
Eight Research rooms for the above subjects, each	...	...	300
Four class rooms, each	...	...	300
<i>Law Department—</i>			
Two lecture rooms, each	...	...	1,500
Four class rooms, each	...	...	375
Common room for Teachers	...	...	300
Private room for the University Professor...	...	...	300
Students' common room	...	...	600
<i>Non-Collegiate Institution—</i>			
Room for the Warden	...	...	600
Office room	...	...	300
Students' common room	...	...	1,200
Tiffin room	...	...	300
<i>Chemical Laboratory—</i>			
Lecture Hall	...	...	2,400
Class room	...	...	1,390
Class room	...	...	1,423
Laboratory for Intermediate Science students	...	...	4,249
Laboratory for B.Sc. Pass students	...	...	4,200
Laboratory for B.Sc. Honours students	...	...	2,055

			Area. Sq. ft.
Laboratory for M.Sc. students	...	...	685
Physical Chemistry room	...	...	946
Two Research rooms, each	...	...	395
Two Research rooms, each	...	...	257
Preparation room	...	...	400
Balance room	...	...	685
Balance room	...	...	342
Balance room	...	...	606
Balance room	...	...	402
Combustion room	...	...	685
Store room	...	...	1,370
Store room	...	...	685
Store and Preparation room	...	...	808
Store and Preparation room	...	...	946
Professor's Laboratory	...	...	783
Professor's Laboratory	...	...	685
Distillation room	...	...	685
Optical room	...	...	467
Dark room	...	...	467
Laboratory Library	...	...	400
Office	...	...	300
Spare room	...	...	514
Museum	...	...	467

Physical Laboratory—

Lecture Hall	...	...	2,400
Two class rooms, each	...	...	623
Two laboratories for Intermediate Science students, each	...	...	2,607
Laboratory for B. Sc. Pass students	...	...	1,536
Laboratory for B. Sc. Pass students	...	...	1,082
Optical room for B. Sc. Pass students	...	...	804
Electrical room for B. Sc. Pass students	...	...	804
Magnetical room	...	...	585
Optical room for B. Sc. Honours and M. Sc. students	...	...	878
Electrical room	...	...	1,170
Two Research rooms, each	...	...	585
Two Research rooms, each	...	...	604
Radio Activity room	...	...	1,196
Professor's Laboratory	...	...	604
Professor's room	...	...	585
Office	...	...	585
Staff Laboratory	...	...	585
Preparation room	...	...	604
Store room	...	...	585
Store room	...	...	293
Store room	...	...	444
Balance room	...	...	454
Balance room	...	...	444
Teachers' common room	...	...	585
Battery room	...	...	256

Zoological Laboratory—

Lecture room	...	...	875
Laboratory	...	...	1,500
Research room	...	...	750
Research room	...	...	662
Preparation room	...	...	428
Museum	...	...	1,282
Store room	...	...	855
Professor's room	...	...	375

Area.
Sq. ft.

Botanical Laboratory—

Lecture room	...	...	...	898
Histology room	...	...	...	1,532
Physiology Experimental room	...	...	...	467
Incubating room	...	...	...	467
Research room	...	...	...	771
Research room	...	...	...	682
Museum	...	...	...	1,378
Professor's room	...	...	...	390
Preparation room	...	...	...	467
Store room	...	...	...	467

2.—EACH COLLEGE BUILDING*—

Lecture and Examination Hall	—	...	3,000
Library ...	...	...	2,000
25 class rooms, each	...	...	363
Teachers' common room	...	...	600
Principal's room	...	...	600
Waiting room	...	...	300
Office and record room	...	...	600
Cloak room	...	...	200
69 rooms, each for 4 students, each	...	...	300
120 single rooms for students, each	...	...	96
4 common rooms, each for 100 students, each	...	...	600
4 sick rooms for students, each	...	...	96
2 sets of quarters for married teachers of the Senior Collegiate service.			
2 sets of quarters for married teachers of the Junior Collegiate service.			
7 Kitchens, dining rooms, fuel rooms, store rooms, each for 50 students.			
2 Kitchens, dining-rooms, etc., each for 25 students	...		

* The accommodation is the same in each of the three Colleges.

3.—GYMNASIUM—

Hall for Exercises	...	...	10,800
Room for Physical Deficiency Exercises	...	...	1,640
One locker and changing room	...	...	2,400
Do. do.	...	...	1,590
Do. do.	...	...	740
Examining room	...	...	320
Room for Director of Physical Education	...	...	610
Room for Gymnastic Instructor	...	...	320

4.—STUDENTS' UNION AND PAVILION—

Two rooms, each	...	...	3,650
Changing room	...	...	375
Store room	...	...	375
Store room ...	...	...	450
Kitchen ...	...	...	450

5.—STAFF CLUB—

Reading room	...	...	750
Billiard room	...	...	750
Refreshment room	...	...	750
Changing room	450
Kitchen	450

6.—HOSPITAL—

Eight Family Wards for 16 patients, each	...	182
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				Area.
				Sq. ft.
3.—DISPENSARY—				
Compounding room	256
Doctor's room	256
Private Examination and minor operations room	192
Dressing room	...	...	...	160
Store room for medicines	...	...	...	192
Miscellaneous store room	...	...	...	160



APPENDIX VI.

Estimated Income from Fees.

	Per mensem. Rs.	Per annum, Rs.
1. <i>Entrance Fees</i> —		
500 Matriculates at Rs. 2	...	1,000
2. <i>Tuition Fees</i> ⁽¹⁾ —		
1,366 undergraduates at Rs. 7-8-0	10,245	1,22,940
225 graduates at Rs. 8	1,800	21,600
Total Tuition Fees	12,045	1,44,540
3. <i>Residential Fees</i> ⁽¹⁾ —		
950 students at Rs. 2	1,900	22,800
250 students at Rs. 3-8-0	875	10,500
		33,300
Deduct on account of 330 bursary holders 3 months' fees at Rs. 2 per mensem	...	1,980
Total Residential Fees	...	31,320
4. <i>Graduates' Registration Fees (initial)</i> ⁽²⁾ —		
Approximately 150 graduates at Rs. 10	...	1,500
Totals.		
1. Entrance Fees	...	1,000
2. Tuition Fees	...	1,44,540
3. Residential Fees	...	31,320
4. Graduates' Registration Fees	...	1,500
Total	...	1,78,360

⁽¹⁾ Fees payable to the Hislop College are omitted.

⁽²⁾ Recurring fees payable by registered graduates are omitted as it is impossible to make even an approximate estimate.

APPENDIX VII.

Estimate of Capital Expenditure.

A.—University and Colleges in Nagpur.

SECTION I.			Rs.
Land Acquisition	...	...	2,50,000
SECTION II—BUILDINGS.			
Main University Building	...	...	18,83,147
Three College Buildings	...	...	25,66,866
Houses for three Principals	...	...	1,01,313
Houses for fifteen I. E. S. Officers and Teachers in the Hislop College of corresponding grade	...	...	3,73,425
Houses for thirty-two S. C. S. Officers and Teachers in the Hislop College of corresponding grade	...	...	2,81,856
Houses for thirty-three J. C. S. Officers and Teachers in the Hislop College of corresponding grade	...	...	1,00,320
Gymnasium	...	...	1,83,400
Hospital, Dispensary	...	...	19,208
Quarters for Medical Staff	...	...	11,666
Students' Union and Pavilion	...	...	42,234
Staff Club	...	...	18,578
Pavilions for playing fields	...	...	13,350
Co-operative Store	...	...	5,424
House for Clerk on Rs. 200 to 300	...	...	5,000
House for one Clerk on Rs. 100 to 150	...	...	2,500
Houses for one Clerk and Head Groundman on Rs. 100	...	...	4,174
Houses for nine Clerks on Rs. 75	...	...	13,373
Houses for sixteen Clerks on Rs. 30 to 60	...	...	15,744
Houses for two Mechanics on Rs. 50 and 40	...	...	1,968
Houses for nine Laboratory attendants	...	...	8,856
Quarters for one-hundred and ninety-eight Menials	...	...	1,05,534
Total	...	...	<u>57,57,936</u>

SECTION III—FURNITURE.

University Offices—

Vice-Chancellor's room	...	...	450
Registrar's room	...	...	450
„ Superintendent's room	...	...	400
„ Office	...	...	900
Warden's room	...	...	450
„ Office	...	...	110

Main University Building—

Convocation Hall	...	...	7,450
Senate and Faculties rooms	...	...	3,600
Law Lecture rooms	...	...	2,550
Law Class rooms	...	...	2,650
Seminar Class rooms	...	...	750
„ Research rooms	...	...	6,650

		Rs.
Arts Professors' Private rooms	...	2,150
Law Professor's Private room	...	300
Library Store and Reading room	...	13,950
Teachers' Reading room	...	2,350
Periodicals room	...	1,900
Non-Collegiate Students' Common room	...	400
Non-Collegiate Students' Tiffin room	...	300
Total	...	<u>47,760</u>

Three Colleges in Nagpur—

Class rooms	...	41,500
Halls	...	8,300
Principals' rooms	...	1,350
Office and Record-rooms	...	1,980
Ante rooms	...	300
Students' Cloak rooms	...	350
Teachers' Common rooms	...	2,100
Residential quarters	...	29,350
Students' Common rooms	...	4,000
Sick rooms	...	510
Libraries	...	<u>12,500</u>
Total	...	<u>1,02,240</u>

GRAND TOTAL ... 1,50,000

SECTION IV—EQUIPMENT.

Libraries—

University—

General	...	75,000
Law	...	25,000
Science	...	20,000
Back numbers of Periodicals	...	14,000
Craddock College	...	10,000
Seminars	...	<u>10,000</u>
Total	...	<u>1,54,000</u>

Seminar Illustrative Equipment ... 2,000

Laboratories —

Chemistry : Furniture and Fittings	...	59,320
„ Apparatus	...	20,000
„ Gas Supply	...	6,100
„ Water Supply	...	10,760
Physics : Furniture and Fittings	...	51,770
„ Apparatus	...	20,000
„ Gas Supply	...	4,135
Physics : Water Supply	...	4,375
Botany and Zoology : Furniture and Fittings	...	31,680
Botany and Zoology : Apparatus	...	<u>20,000</u>
Total	...	<u>2,30,140</u>

	Rs.
Museum ...	10,000
Kitchen utensils, etc., for three Colleges ...	6,750
Hospital and Dispensary ...	500
Gymnasium ...	15,000
Maps, pictures for College class rooms ...	1,500
Total ...	33,750
GRAND TOTAL ...	4,17,890

SECTION V—GROUNDS AND PLAYING FIELDS.

Roads, laying out of grounds, playing fields and tennis courts ...	43,500
Planting trees, shrubs, etc. ...	25,000
Total ...	68,500

SECTION VI—WATER SUPPLY, ELECTRIC SUPPLY AND DRAINAGE.

Water Supply ...	52,295
Electric Supply ...	2,74,593
Drainage ...	2,75,000
Total ...	6,01,888

SECTION VII—MISCELLANEOUS.

Diversion of Tram Line ...	1,375
Ornamental Railing, Wire Fencing and Diversion of Kamptee Road ...	1,08,765
Filling of Quarries ...	7,826
Total ...	1,17,966

Totals of Sections—

Section I ...	2,50,000
Section II ...	57,57,936
Section III ...	1,50,000
Section IV ...	4,17,890
Section V ...	68,500
Section VI ...	6,01,888
Section VII ...	1,17,966
GRAND TOTAL ...	73,64,180

B.—Robertson College, Jubbulpore.

SECTION I.

Land Compensation ...	14,000
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SECTION II—BUILDINGS.

Main College building ...	2,36,650
Kitchen for main building ...	34,755
3 Hostels, each for 50 students ...	1,42,314
Laboratories ...	81,885
Principal's house ...	28,736
House for one I.E.S. Officer... ..	24,895
Houses for two I.E.S. Officers ...	39,006
Houses for thirteen S.C.S. Officers ...	1,46,510

Rs.

Houses for nine J.C.S. Officers	...	27,360
Gymnasium	...	50,000
Co-operative Store	...	3,388
56 Servants' Quarters	...	26,092
4 Clerks' Quarters	...	5,000
2 Demonstrators' Quarters	...	4,708
Hospital, Surgeon's and Compounder's Quarters, and out-houses	...	11,000
Total	...	<u>8,62,299</u>

SECTION III—GROUNDS AND PLAYING FIELDS.

Fencing and gates	...	20,000
Roads, pathways	...	8,000
Grounds and playing fields	...	9,000
Total	...	<u>37,000</u>

SECTION IV—FURNITURE AND EQUIPMENT.

Furniture :—

Lecture and Class Rooms	...	4,200
Hall	...	1,650
Library (including Librarian's Room)	...	3,800
Principal's Room	...	400
Office	...	1,200
Teachers' Common Room	...	500
Students' Common Rooms	...	750
Residential Quarters (for 300 students)	...	9,950
Maps, pictures, etc., for Class Rooms	...	500

Science Section—

Hall and Library	...	550
Lecture Rooms, Preparation Rooms, etc.	...	12,800
Gas Supply	...	2,100
Gas Plant	...	8,200
Water supply	...	4,100
Apparatus for Physics Laboratory	...	5,000
„ for Chemistry „	...	5,000
Equipment for Gymnasium	...	5,000

Total ... 65,700

SECTION V.—WATER SUPPLY, ELECTRIC SUPPLY, DRAINAGE.

Water-works supply and distribution	...	35,000
Sewage disposal	...	15,000
Electric supply	...	75,000

Total ... 1,25,000

Totals—

Section I	...	14,000
Section II	...	8,62,299
Section III	...	37,000
Section IV	...	65,700
Section V	...	1,25,000

GRAND TOTAL ... 11,03,999

C.—King Edward College, Amraoti.

Rs.

SECTION I—LAND COMPENSATION.

At $2\frac{1}{2}$ per cent of capital outlay on buildings ...	25,820
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SECTION II—BUILDINGS.

Main College building (for 400 students) ...	3,90,916
Residential quarters (for 300 students) ...	3,35,838
Laboratories ...	40,000
Principal's house ...	33,771
Houses for 2 I.E.S. Officers at Rs. 24,895 ...	49,790
Houses for 9 S.C.S. Officers at Rs. 8,808 ...	79,272
Houses for 7 J.C.S. Officers at Rs. 3,040 ...	21,280
Quarters for 3 Clerks at Rs. 984 ...	2,952
„ 30 menials at Rs. 533 ...	15,990
„ Head mali and Mechanic at Rs. 984 ...	1,968
Gymnasium ...	50,000
Dispensary and quarters for Assistant Surgeon, etc. ...	11,000
Co-operative Store ...	4,235
Total ...	<u>10,37,012</u>

SECTION III—GROUNDS AND PLAYING FIELDS.

Laying out grounds, playing fields, etc. ...	8,000
Fencing and roads ...	25,000
Total ...	<u>33,000</u>

SECTION IV—FURNITURE AND EQUIPMENT.

Class rooms ...	12,500
Hall ...	2,700
Principal's room ...	450
Office ...	660
Teachers' Common room ...	1,250
4 Students' Common rooms ...	950
Library (Rs. 10,000 books, Rs. 3,500 furniture). ...	13,500
Residential quarters for 300 students ...	9,950
Maps, pictures, etc., for Class rooms ...	500
Gymnasium ...	5,000

Chemistry Laboratory—

Furniture ...	8,500
Apparatus ...	8,000

Physical Laboratory—

Furniture ...	5,500
Apparatus ...	10,000

Gas plant ...	7,500
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Total ...	<u>86,960</u>
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SECTION V—WATER SUPPLY, ELECTRIC SUPPLY AND DRAINAGE.

		Rs.
Water-works supply and distribution	...	35,000
Sewage disposal	...	15,000
Electric supply	...	75,000
		<hr/>
Total	...	1,25,000
		<hr/>
Totals—		
Section I	...	25,820
Section II	...	10,37,012
Section III	...	33,000
Section IV	...	86,960
Section V	...	1,25,000
		<hr/>
GRAND TOTAL	...	13,07,792
		<hr/>

GRAND TOTAL GROSS CAPITAL EXPENDITURE.

A. University and 3 Colleges in Nagpur	...	73,64,180
B. Robertson College, Jubbulpore	...	11,03,999
C. King Edward College, Amraoti	...	13,07,792
		<hr/>
Total	...	97,75,971
		<hr/>



APPENDIX VIII.

Estimate of Recurring Expenditure.

A.—The University and the Incorporated Colleges in Nagpur.

SECTION I.—ADMINISTRATIVE STAFF.

	Per men- sem.	Per an- num.
	Rs.	Rs.
Warden, I. E. S., on Rs. 500—50—1,000 ...	850	10,200
Director of Physical Education, I. E. S. ...	850	10,200
Registrar, I. E. S. ...	850	10,200
Librarian, S. C. S., on Rs. 200—20—500 ...	367	4,404
Gymnastic Instructor, J. C. S., on Rs. 80—8—200 ...	150	1,800
Assistant Surgeon on Rs. 150, plus Rs. 50 allowance...	200	2,400
Sub-Assistant Surgeon on Rs. 55, plus Rs. 15 allowance ...	70	840
Pension contribution for above officers ...	830	9,960
Total ...	4,167	50,004

SECTION II.—TEACHING STAFF.

22 I. E. S. including the Principals of the two Colleges at Rs. 850 ...	18,700	2,24,400
27 S. C. S. at Rs. 367 ...	9,909	1,18,908
33 J. C. S. at Rs. 150 ...	4,950	59,400
1 Law Professor at Rs. 1,000—20—1,200 ...	1,122	13,464
1 Law Lecturer at Rs. 750—25—1,000 ...	903	10,836
3 Law Lecturers as Rs. 400—20—600 ...	1,566	18,792
1 Law Tutor at Rs. 300 ...	300	3,600
Pension contribution for above officers ...	7,590	91,080
Total ...	45,040	5,40,480

SECTION III.—CLERICAL ESTABLISHMENT.

1 Superintendent on Rs. 200—10—300, average ...	267	
1 Clerk on Rs. 100—10—150 ...	138	
1 Clerk on Rs. 100 ...	100	
1 Clerk on Rs. 75—5—100 ...	94	
7 Clerks on Rs. 75 ...	525	
7 Clerks on Rs. 50 ...	350	
7 Clerks on Rs. 30 ...	210	
Pension contribution for above ...	187	
Total ...	1,871	22,452

SECTION IV.—MISCELLANEOUS SUBORDINATE ESTABLISHMENT.

Chemistry Department—

1 Mechanic on Rs. 50 ...	50	600
1 Laboratory Attendant on Rs. 20 ...	20	240
3 Laboratory Attendants on Rs. 15 ...	45	540

Physics Department—

1 Mechanic on Rs. 40 ...	40	480
1 Laboratory Attendant on Rs. 20 ...	20	240
2 Laboratory Attendants on Rs. 15 ...	30	360

Biology Department—

2 Laboratory Attendants on Rs. 20 ...	40	480
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			Per men- sem. Rs.	Per an- num. Rs.
<i>Hospital—</i>				
1 Compounder at Rs. 15	15	180
1 Dresser at Rs. 12	12	144
<i>Grounds—</i>				
1 Head Groundman	...	...	100	1,200
Pension contribution for above subordinates	...	...	41	492
		Total	413	4,956

SECTION V.—MENIAL ESTABLISHMENT.

University—

1 Chowkidar for Science Department, at Rs. 12	...	12	144
1 Chowkidar for other parts of University building, at Rs. 12	...	12	144
5 Chaprasis for Science Department, at Rs. 8	...	40	480
1 Chaprasi for Dean of Law Faculty, at Rs. 8	...	8	96
2 Chaprasis for Registrar, at Rs. 8	...	16	192
1 Chaprasi for Librarian, at Rs. 8	...	8	96
1 Chaprasi for Director of Physical Education, at Rs. 8	...	8	96
1 Chaprasi for Warden, at Rs. 8	...	8	96
2 Bearers for Chemistry Department, at Rs. 8	...	16	192
2 Bearers for Physics Department, at Rs. 8	...	16	192
2 Bearers for Biology Department, at Rs. 8	...	16	192
3 Bearers for Library, at Rs. 8	...	24	288
2 Bearers for Seminars, at Rs. 8	...	16	192
1 Bearer for Law Department, at Rs. 8	...	8	96
3 Bearers for Gymnasium, at Rs. 8	...	24	288
24 Malis at an average of Rs. 9	...	216	2,592
1 Farrash for Physics Department, at Rs. 7	...	7	84
1 Farrash for Chemistry Department, at Rs. 7	...	7	84
1 Farrash for Biology Department, at Rs. 7	...	7	84
1 Farrash for Registrar's Office, at Rs. 7	...	7	84
1 Farrash for Seminars, at Rs. 7	...	7	84
1 Farrash for rest of University Building, at Rs. 7	...	7	84
2 Farrashes for Gymnasium, at Rs. 7	...	14	168

Colleges—

32 Cooks at Rs. 15	...	480	5,760
32 General Servants for residential quarters at Rs. 8...	...	256	3,072
4 Chowkidars at Rs. 12	...	48	576
10 General bearers for Colleges at Rs. 8	...	80	960
4 Chaprasis for Principals at Rs. 8	...	32	384
4 Chaprasis for Teachers' Common Rooms at Rs. 8	...	32	384
6 Sweepers at Rs. 7	...	42	504

Dispensary—

1 Cook at Rs. 10	...	10	120
1 Sweeper at Rs. 7	...	7	84
Pension contribution for menials on Rs. 10 and over, except cooks	...	8	96

Total ... 1,499 17,988

SECTION VI.—CONTINGENCIES.

			Rs.
General University (including Office, Stationery and Printing)	...	...	12,000
Travelling Allowances	...	...	5,000
Water and Drainage	...	...	4,533
Electric Supply	...	...	35,088
Scholarships, bursaries, etc.	...	...	55,300
Prizes	...	...	300
Allowances for Readers	...	...	4,000
Hospital and Dispensary	...	...	500

Physical Education—

		Rs.
Gymnasium	...	300
Playing fields and grounds	...	2,000

Libraries—

University	...	13,500
Colleges	...	1,500
Seminars and Laboratories	...	1,000
Seminar Illustrative Equipment	...	500

Laboratories—

Chemistry	...	6,500
Physics	...	4,500
Botany and Zoology	...	3,000
Gas Supply	...	2,000
Art Museum	...	1,000

Colleges—

Offices	...	2,000
Residential Quarters—Furniture, etc.	...	1200
Maintenance charges for all buildings except residences of teaching, subordinate, clerical and menial staff, and for roads	...	70,000

Total ... 2,25,721

Grand Total—

Section I	...	50,004
Section II	...	5,40,480
Section III	...	22,452
Section IV	...	4,956
Section V	...	17,988
Section VI	...	2,25,721

Total ... 8,61,601

B.—Robertson College, Jubbulpore.

		Per mensem. Rs.	Per annum. Rs.
SECTION I.—TEACHING STAFF.			
4 I. E. S. on Rs. 850	...	3,400	40,800
13 S. C. S. „ 367	...	4,771	57,252
11 J. C. S. „ 150	...		
(including Gymnastic Instructor)	...	1,650	19,800
Pension contribution for above officers	...	1,716	20,592
Total	...	11,537	1,38,444

SECTION II.—SUBORDINATE STAFF.

1 Head Clerk on Rs. 75	...	75	900
1 Library Clerk „ 50	...	50	600
1 Assistant to Head Clerk on Rs. 30	...	30	360
1 Assistant Clerk on Rs. 40	...	40	480
1 Head Mali „ 20	...	20	240
1 Mechanic „ 30	...	30	360
Pension contribution for above staff	...	27	324
Total	...	272	3,264

Per mensem. Per annum.
Rs. Rs.

SECTION III.—MEDICAL STAFF.

1 Assistant Surgeon on Rs. 150, plus Rs. 50 allowance	...	200	2,400
1 Compounder on Rs. 15	...	15	180
Pension contribution for above staff	...	18	216
Total	...	233	2,796

SECTION IV.—MENIAL STAFF.

12 Cooks on Rs. 15	...	180	2,160
12 Servants for residential quarters on Rs. 8	...	96	2,152
5 General bearers for College on Rs. 8	...	40	480
2 Chaprasis for Principal on Rs. 8	...	16	192
2 Chaprasis for Staff on Rs. 8	...	16	192
3 Sweepers on Rs. 7	...	21	252
4 Malis on average of Rs. 9	...	36	432
5 Chowkidars on Rs. 12	...	60	720
2 Laboratory Attendants on Rs. 10	...	20	240
Pension contribution for menials on Rs. 10 and over, except cooks	...	9	108
Total	...	494	5,928

SECTION V.—CONTINGENCIES.

Office	...	...	1,000
Library	...	...	1,000
Residential quarters, Furniture, etc.	...	...	600
Laboratories	...	...	2,500
Grant for Games	...	...	300
Grounds	...	...	500
Hospital and Dispensary	...	...	200
Gymnasium	...	...	150
Prizes	...	...	100
Maintenance charges for buildings (except residential quarters of staff) and roads	...	..	11,000
Total	...	...	17,350

Totals—

Section I	...	...	1,38,444
Section II	...	...	3,264
Section III	...	...	2,796
Section IV	...	...	5,928
Section V	...	...	17,350

GRAND TOTAL ... 1,67,782

C.—King Edward College, Amraoti.

SECTION I.—TEACHING STAFF.

3 I. E. S. on Rs. 850	...	2,550	30,600
11 S. C. S. on Rs. 367	...	4,037	48,444
10 J. C. S. on Rs. 150 (including Gymnastic Instructor)	...	1,500	1,800
Pension contribution for above officers	...	1,367	16,404
Total	...	9,454	1,13,448

	Per mensem. Rs.	Per annum. Rs.
SECTION II.—SUBORDINATE STAFF.		
1 Head Clerk on Rs. 75 ...	75	900
1 Library Clerk on Rs. 50 ...	50	600
1 Assistant to Head Clerk on Rs. 30 ...	30	360
Pension contribution for above staff ...	17	204
Total ...	172	2,064

SECTION III.—MEDICAL STAFF.		
1 Assistant Surgeon on Rs. 150, plus Rs. 50 allowance ...	200	2,400
1 Compounder on Rs. 15 ...	15	180
Pension contribution for above staff ...	18	216
Total ...	233	2,796

SECTION IV.—MENIAL STAFF.		
8 Cooks on Rs. 15 ...	120	1,440
8 Servants (for residential quarters) ...	64	768
4 General bearers for College on Rs. 8 ...	32	384
3 Chaprasis on Rs. 8 ...	24	288
2 Sweepers on Rs. 7 ...	14	168
1 Mali on Rs. 20 ...	20	240
3 Malis on an average of Rs. 9 ...	27	324
2 Chowkidars on Rs. 12 ...	24	288
1 Laboratory Attendant on Rs. 15 ...	15	180
Pension contribution for menials on Rs. 10 and over, except cooks ...	7	84
Total ...	347	4,164

SECTION V.—CONTINGENCIES.		
Office ...	...	800
Library ...	...	1,000
Hostel—Furniture, etc. ...	...	500
Laboratories ...	...	1,500
Grants for Games ...	...	300
Grounds ...	...	500
Hospital and Dispensary ...	...	150
Gymnasium ...	...	150
Prizes ...	...	100
Maintenance charges for buildings (except residential quarters) and for roads ...	...	15,000

Totals—		
Section I ...	...	1,13,448
Section II ...	...	2,064
Section III ...	...	2,796
Section IV ...	...	4,164
Section V ...	...	20,000
GRAND TOTAL ...	...	1,42,472

GRAND TOTAL GROSS RECURRING EXPENDITURE.		
A. University and Colleges in Nagpur ...	...	8,61,601
B. Robertson College, Jubbulpore ...	...	1,67,782
C. King Edward College, Amraoti ...	...	1,42,472
Total ...	...	11,71,855

APPENDIX IX.

Report of the Chief Engineer, Roads and Buildings Branch, Public Works Department.

WATER-SUPPLY.

The proposals have been considered in sufficient detail to arrive at an approximate estimate of the cost, but, until the sites of the different buildings are finally settled, an elaborate water-supply distribution system cannot be worked out. The following outline shows the general principles adopted for the preparation of the estimate. The supply will be obtained from the existing system, a branch being taken off from the twelve-inch main which passes through the Sudder Bazar. It has been estimated that 30 gallons per head will be required for the occupants of the larger bungalows, and 15 per head for those in the smaller quarters; this, with some additional allowance for sanitary purposes, swimming bath and laboratories, should suffice for all purposes. The daily supply required will be about 75,000 gallons, and for this a five-inch branch main will be required. The conservancy system for the quarters has not yet been definitely fixed, and, if it is eventually decided to provide a complete water-borne sewerage system throughout, the above figure may be found insufficient; still, for ordinary purposes it provides an ample margin. The general supply will be similar to that of the existing Civil Lines system; water will be laid on to all the College buildings, and the larger bungalows will have water supplied to bath-rooms and cook houses, with stand pipes for servants' quarters and gardens. For the smaller quarters, street stand pipes should suffice, especially as water, laid on to small houses of the class to be provided, tends to produce insanitary conditions.

The estimated cost is Rs. 52,295.

DRAINAGE AND SEWERAGE.

It is not possible, at the present stage, to deal with this question in any great detail, as the sites are only provisionally fixed, and any change in the positions of the buildings would probably necessitate an entire rearrangement of the sewerage system. The proposals are, therefore, only broadly indicated. The ample water-supply, which it is intended to provide, necessitates equally efficient drainage, especially as the site, which, for the most part, lies on black cotton soil, is liable in its present state to become, to some extent, water-logged after heavy rain. The site as a whole is, however, well raised, the slopes are well marked, and there will be no difficulty in obtaining sufficient fall for surface drains and sewers, but owing to the nature of the soil, the former, where required to be of concrete or masonry, will be expensive to construct. As at present proposed, the sewers will be extended to all the main buildings and quarters. Water-borne sanitary arrangements have not, up-to-date, been provided for any Government quarters in Nagpur, but there is no doubt that they are by far the best means of disposing of sullage water and night soil, and it is most desirable that they should be utilized to the fullest possible extent in the sanitary system of the new University. Although the site is favourable for the laying down of a satisfactory drainage system, yet it is not at a sufficient elevation for the outlet to deliver by gravitation into the general town system at present under construction. The sewerage will therefore deliver into a sump, and be pumped from there into the nearest town sewer. It will probably be found that the most convenient arrangement will be electrically driven pumps with power supplied by the Electric Light and Power Company.

The estimated cost is Rs. 2,75,000.